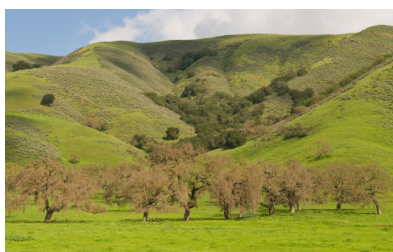




Monterey Bay 2045

Moving Forward

Sustainability.
Mobility.
Accessibility.
Economy.
Social Equity.



2045

Metropolitan Transportation Plan / Sustainable Communities Strategy

Final
June 2022



Moving Forward Monterey Bay 2045

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Executive Summary



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Introduction

Solutions to the region's transportation needs require a comprehensive planning effort that coordinates land use patterns and transportation investments with the objective of developing an integrated, multimodal and equitable transportation system. The Metropolitan Transportation Plan (MTP) and its Sustainable Communities Strategy (SCS) are built on a set of integrated policies, strategies, and investments to maintain and improve the transportation system to meet the diverse needs of the region through 2045.

Our Vision

A Resilient and Sustainable Future

As the Monterey Bay Area emerges from the COVID-19 pandemic, there are many opportunities to enact new policies and practices to better reflect the needs and desires of all who live in the region. Together, residents and leaders can work toward inclusivity and prosperity for those who live and work in the region by taking bold actions in the face of a rapidly changing world.

Moving Forward Monterey Bay 2045 explores how the region may grow over the next 25 years and offers cross-disciplinary strategies for regional government and its many partners to work together. Under the vision and strategies in the Plan, the region can work toward resilient, equitable solutions that will improve the lives of all current and future Monterey Bay Area residents.

The word "sustainable" is used in many contexts. In the case of this Plan it refers to the mandates arising from Senate Bill (SB) 375, California's Sustainable Communities and Climate Protection Act, to develop a Sustainable Communities Strategy. At the heart of SB 375 is the requirement to coordinate transportation investments with land use patterns such that the region makes informed decisions about where to invest the region's limited resources and simultaneously reduce greenhouse gases by providing more direct access to destinations as well as by providing alternative transportation options. Instead of basing investments solely on transportation need, this Plan is required to analyze where people are going and how they want to get there in order to build a transportation network that addresses the mobility and accessibility needs of the region. One strategy included in this Plan to achieve this is more focused growth in high quality transit corridors. Another strategy in the Plan is to provide more travel choices as well as a safe and efficient transportation system with improved access to jobs and education for our residents. In addition, the 2045 MTP/SCS supports job creation through economic development, ensures our region's economic competitiveness through strategic investments in freight, and improves environmental outcomes for the region's residents by 2045.

Senate Bill 375

Under SB 375, the SCS should demonstrate the land use and transportation measures that will be used to meet the region's greenhouse gas emission reduction targets as established by the California Air Resources Board (CARB)- a three percent reduction per capita change by 2020 and six percent per capita reduction by 2035 from passenger vehicles. Both targets are compared to 2005 levels of greenhouse gases. SB 375 was enacted to support the state's goals of Assembly Bill 32, the Global Warming Solutions Act of 2006. Meeting these targets will move the region toward overall sustainability and will provide benefits beyond reducing emissions.

Regional Growth

The Monterey Bay Area is projected to grow more slowly than the state and nation. A map of the region is shown in Figure ES-1. In 2015, there were 762,241 people in the Monterey Bay Area spread over an area of 5,157 square miles. In 2045, the population is expected to reach 869,776. Additionally, there were 262,660

housing units in the region in 2015. The region is expected to add more than 42,000 housing units by 2045 and more than 65,000 new jobs as shown in Figures ES-2 and ES-3.

Senate Bill 375

Senate Bill 375, passed in late 2008, requires the 18 Metropolitan Planning Organizations (MPO) in California to reduce transportation related per capita greenhouse gas emissions through a coordinated land use and transportation plan called the Sustainable Communities Strategy, or SCS. The SCS is included in AMBAG's Metropolitan Transportation Plan and will help shape the region's long range transportation plan, including the financing of transportation projects.

Under SB 375, the SCS must identify a regional development pattern and transportation system that can meet the regional greenhouse gas (GHG) targets reductions from cars and light trucks for 2020 and 2035.

Pursuant to statute, the California Air Resources Board (CARB) updated targets for each of the 18 MPOs across the state in 2018. CARB adopted the following updated targets for the Monterey Bay Area in

2020: 3% reduction from 2005 per capita GHG emissions

2035: 6% reduction from 2005 per capita GHG emissions

If the SCS cannot meet the GHG targets, an "Alternative Planning Scenario" must be prepared to show how the targets could be achieved.

Goals & Policies

AMBAG adopted a framework of goals and policy objectives to guide the development of the 2045 MTP/SCS. Chapter 1 presents these goals and policies within the context of the regional vision for 2045. The goal areas are:

- Access and Mobility
- Economic Vitality
- Environment
- Healthy Communities
- Social Equity
- System Preservation and Safety

Transportation Investments

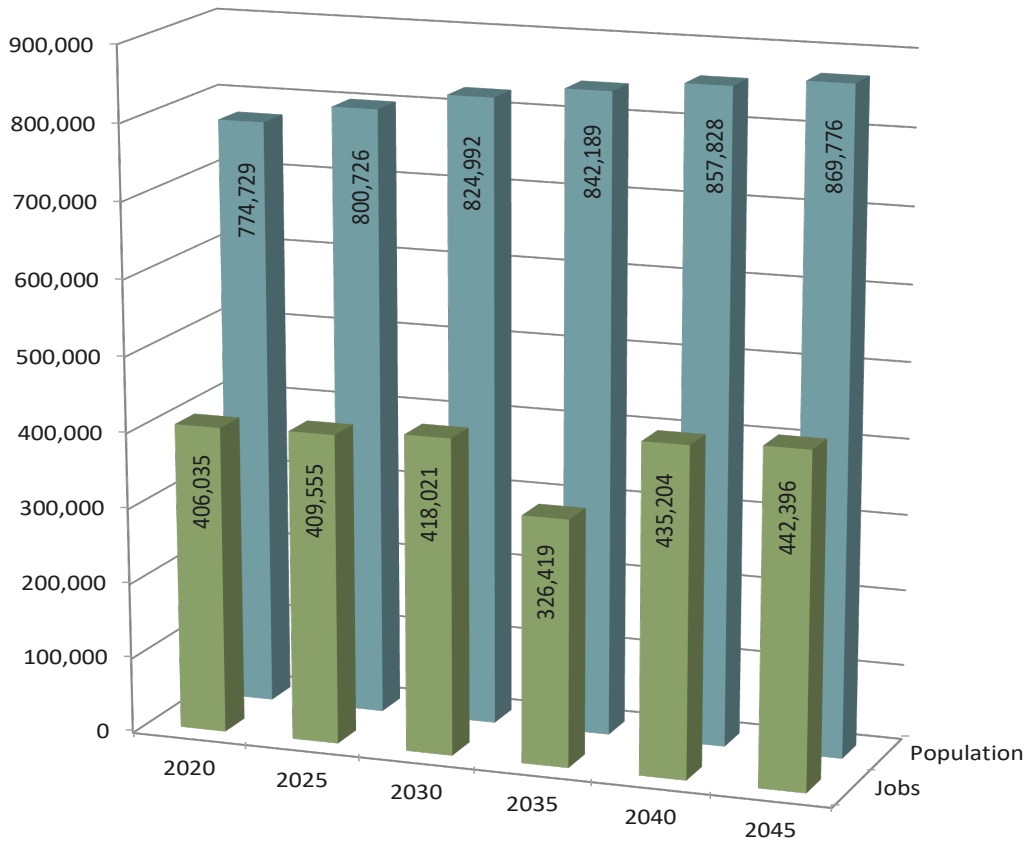
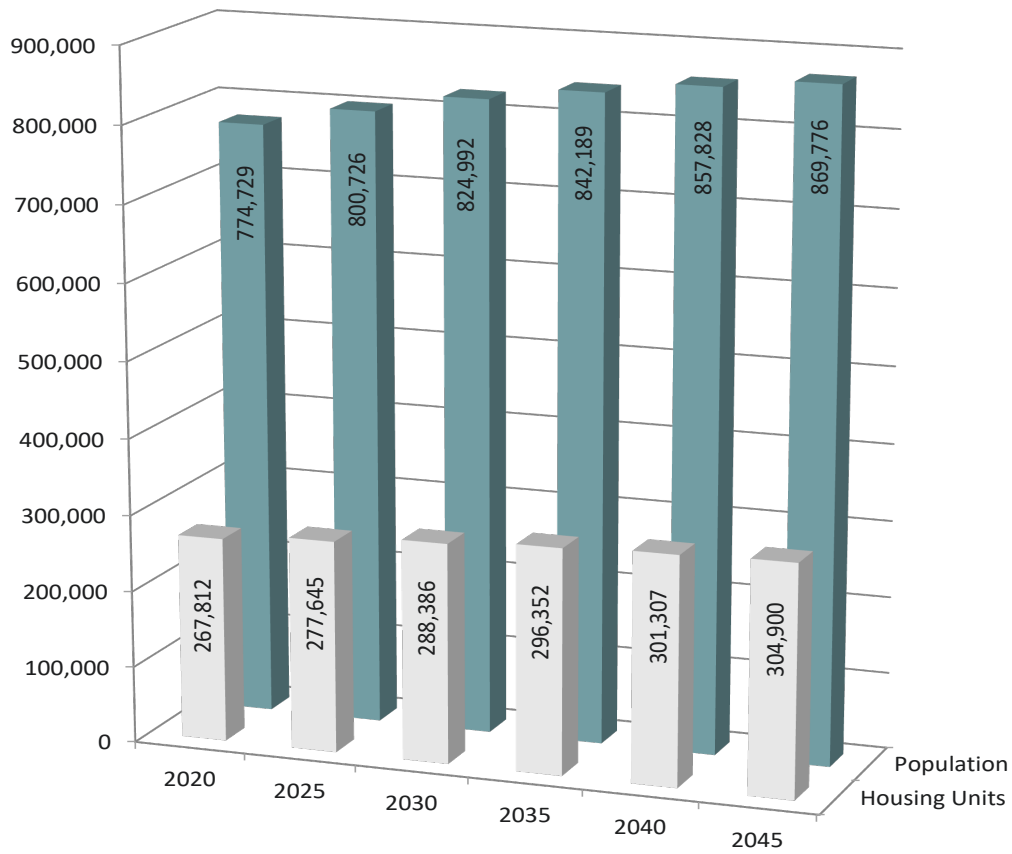
The 2045 MTP/SCS contains a number of improvements to the region's multimodal transportation system. These improvements include closures of critical gaps in the network that hinder access to jobs and daily needs, as well as the strategic expansion of the transportation system to provide the region with increased mobility.

One of the Plan's goals is to reduce per capita greenhouse gas emissions over the next 25 years, however,

Figure ES-1
AMBAG Region
 June 2022 Source: AMBAG

AMBAG Region

Figure ES-2 and ES-3: Population, Housing Units and Jobs



Source: AMBAG 2022 Regional Growth Forecast

the total demand to move people and goods will continue to grow due to the region's projected population increase.

A strategic expansion of the transportation system is needed to provide the region with the mobility it needs. The 2045 MTP/SCS targets this expansion around mutually supportive bus transit, rail, key roadway, and active transportation projects. The Plan does so as cost effectively as possible by employing strategies such as combining maintenance and operations projects with bicycle and pedestrian facility improvements. Chapter 2 discusses these investments in greater detail.

Financial Plan

Of all the challenges facing the region today, there is perhaps none more critical than funding. Currently, the region faces a funding shortfall just to maintain and operate the existing system. With projected growth in population, employment, and demand for travel over the next 20 years, the costs of multimodal transportation are increasing, compounding the need for new sources of revenue.

The region must consider ways to stabilize existing revenue sources and supplement them with reasonably available new sources. The region needs a long-term, sustainable funding plan that ensures the region receives its fair share of funding and supports an efficient and effective transportation system that grows the economy, provides mobility choices, and improves quality of life.

Chapter 3 provides such a financial plan and identifies how much money is available to support the region's transportation investments. The Plan includes a revenue forecast of approximately \$13.5 billion that includes local, state, and federal sources reasonably expected to be available over the timeline of the 2045 MTP/SCS.

Sustainable Communities Strategy

Chapter 4 contains the SCS which demonstrates the region's ability to exceed the GHG emission reduction targets set forth by the CARB. The SCS outlines the region's plan for integrating the transportation network within an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands while reducing GHG emissions. The overall SCS land use development pattern complements the proposed transportation network which emphasizes multimodal system enhancements, system preservation, and improved access to high quality transit.

Performance Measures

In support of the goals and policies established through public participation efforts and stakeholder involvement, a dozen performance measures were established to measure how well the Plan performs. The investments in the 2045 MTP/SCS are expected to result in significant benefits to the region with respect to transportation and mobility, economic activity and job creation, sustainability, and environmental justice. As described in Chapter 5, the 2045 MTP/SCS meets the greenhouse gas emission reduction targets set by CARB by achieving a three percent per capita reduction for 2020 and a six percent per capita reduction for 2045.

Public Participation

The development of the 2045 MTP/SCS involved implementation of one of the most comprehensive and coordinated public participation plans ever undertaken by AMBAG, exceeding legislative requirements.

AMBAG engaged a wide range of stakeholder groups, elected officials, special interest groups and the general public through a series of meetings and workshops. An interactive website expanded AMBAG's ability to engage and involve stakeholders and the public in shaping the 2045 MTP/SCS. During COVID-19, AMBAG held a number of workshops and meetings virtually to gather input on the development of the 2045 MTP/SCS. Virtual engagement has been successful over the development of the Plan and will continue, along with in person engagement, post pandemic. The input received through this process was critical in defining a preferred land use and transportation strategy and meeting/exceeding the 2045 MTP/SCS goals and policies. Chapter 6 details the public outreach process to involve and engage stakeholders and the public throughout the 2045 MTP/SCS planning process.

1

Vision



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Setting

Solutions to the region's transportation needs require a comprehensive planning effort that coordinates land use and transportation and develops an integrated, multimodal and equitable transportation system. The Metropolitan Transportation Plan (MTP) and its Sustainable Communities Strategy (SCS) are built on a set of integrated policies, strategies, and investments to maintain and improve the transportation system to meet the diverse needs of the region through 2045.

The region's population is largely concentrated in urban areas consisting of the 18 incorporated cities, which accounts for 78 percent of the total regional population. Unincorporated areas account for the remaining 22 percent. With the exception of Hollister and Salinas, major urban development in the Monterey Bay Area primarily occurs along the Bay coastal plains and foothills of the Monterey Peninsula from the City of Santa Cruz in the north to the City of Carmel-by-the-Sea to the south. The Santa Cruz, Watsonville, Seaside-Monterey, and Salinas urbanized areas are the most densely developed in the region.

In 2015, there were 762,241 people in the Monterey Bay Area spread over an area of 5,157 square miles. By 2045, the population is expected to reach 869,776. In addition, there were 262,660 housing units in the region in 2015. The region is expected to add more than 42,000 housing units by 2045.

The largest industries in the region by revenue and employment are tourism, agriculture, education, military, and other government sectors. These trends are expected to continue through 2045.

The 2045 MTP/SCS must comply with specific state and federal mandates. These include an SCS, per California Senate Bill 375 (Steinberg, 2008) (SB 375), that achieves GHG emissions–reduction targets set by the California Air Resources Board; compliance with federal civil rights requirements (Title VI); environmental justice considerations; air quality conformity; and public participation.

Key State goals, policies, and Executive Orders considered in the 2045 MTP/SCS:

- SB 375 and SCS Program and Evaluation Guidelines
- 2017 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations
- California Transportation Plan 2050
- California Senate Bill 32 (Pavley, 2016): Reduce GHG emissions 40% below 1990 levels by 2030
- EO B-55-18: Carbon Neutrality by 2045
- EO S-3-05: Reduce GHG emissions 80% below 1990 levels by 2050
- EO N-19-19: empowers the California State Transportation Agency (CalSTA) to leverage discretionary state transportation funds to help meet the state's climate goals.
- EO N-79-20: 100% zero-emission vehicle sales by 2035

Senate Bill 375

The SCS is a new element of the MTP, as required by SB 375, and is designed to demonstrate how the region will meet the regional greenhouse gas (GHG) reduction targets established by the California Air Resources Board (CARB). For the Monterey Bay region, the targets are a three percent per capita reduction by 2020 and six percent per capita reduction by 2035.

To achieve these GHG targets, the SCS examines development patterns, transportation investments, and transportation measures or policies that are determined to be feasible. In addition, the SCS must be consistent with the Regional Housing Needs Assessment (RHNA) and must address protection of resource areas. If the SCS does not meet regional GHG reduction targets, an Alternative Planning Strategy (APS) must be developed to demonstrate how the targets could be achieved.

Implementation of the 2045 MTP/SCS is anticipated to achieve a four percent per capita reduction by 2020 and a nearly seven percent per capita reduction by 2035.

A Resilient and Sustainable Future

When planning for the future, decisionmakers must craft both a strong principled vision that centers on equity and the practical, achievable steps that can make this vision a reality. Moving Forward Monterey Bay 2045 explores how the region may grow over the next 25 years and offers cross-disciplinary strategies for regional government and its many partners to work together. Under the vision and strategies included in the Plan, the region can work toward resilient, equitable solutions that will improve the lives of all current and future residents.

The 2045 MTP/SCS serves as a blueprint for addressing the mobility and sustainability challenges faced in the region. The 2045 MTP/SCS will improve the quality of life for residents by implementing sound land use and transportation choices for the future. By 2045, the region is envisioned to have more travel choices and a safer, more efficient transportation system that provides improved access to jobs and education. In addition, the Plan will support job creation, expand the region's economic competitiveness through investments in freight, and improve environmental quality for the region's nearly one million residents by 2045.

This 2045 MTP/SCS is built on a set of integrated policies, strategies, and investments to maintain and improve the transportation system to meet the diverse needs of the region through 2045.

Regional Growth

The Monterey Bay Area is projected to grow more slowly than the state and nation. By the year 2045, the region's population is forecasted to exceed 896,700 people. That's an increase of more than 134,500 people; along with more than 42,000 new housing units and over 65,000 new jobs. See Tables 1-1 through 1-3 for detailed forecast figures.

The regional growth forecast was developed by the Population Reference Bureau, which takes a jobs based approach to forecasting trends in growth for the region. The assumption is that the economy is a better predictor of population growth than traditional sources of migration data. Detailed information on the Regional Growth Forecast is included in Appendix A.

Jobs

The Monterey Bay Area is projected to add 65,000 jobs between 2015 and 2045.

The region is projected to experience job growth at a slightly slower rate than the state and nation. The primary reason is the region's below-average concentration in fast-growing sectors such as Information and Professional and Business Services. The region also has a below-average exposure to growth in foreign trade. Positive growth factors include an expected above average performance relative to state trends in the agriculture and tourism sectors.

Agricultural jobs are projected to increase modestly and, by 2045, will be the sixth largest major industry sector after Financial and Professional Services. Public job levels are also projected to increase modestly following recession cutbacks as government, schools and healthcare providers will be required to serve 134,000 additional residents in 2045 as compared to 2015.

The largest job gains in absolute numbers and percentage increases are in Other Services and Health Care & Social Assistance: Other Service 15,414,25 percent increase, and Health Care & Social Assistance 10,754,24 percent increase from 2015 to 2045. This growth will be led by sectors associated with health care and social services for an aging population.

The Retail sector is projected to experience nearly a two percent growth or approximately 748 jobs.

Site-based Skilled Trade job levels are projected to rebound from recent lows, experiencing a 25 percent increase through 2045, adding 9,500 jobs throughout the region. Although there is a substantial gain measured from 2015 job levels, it is primarily driven by a slow return to more normal site-based skilled trade levels in the region.

2045 Manufacturing job levels are projected to increase by 2,500 jobs, or a 15 percent growth. These projections do not anticipate any major move of high tech manufacturing jobs from Silicon Valley to the Monterey Bay Area.



The Monterey Bay Area has more residents per job than the national average and that trend is expected to continue to 2045. This is due to the fact that a large portion of AMBAG's residents commute to jobs outside the region, primarily to jobs in Santa Clara County.

In addition, the Monterey Bay Area has an above average share of residents who live in group quarters and are not tied to the regional job market. This trend has continued since 1990, although the mix of group quarters residents has changed. Out commuting is expected to increase in line with Silicon Valley job growth but prison and college group quarters population are not expected to increase as fast as in the past, therefore reinforcing the existing interregional commute pattern.

The number of people per job surged during the 2008 recession as job levels fell while the population continued to grow. Between 2020 and 2045, job levels will grow more slowly than population as baby boomers retire from the workforce but remain in the population.

Population and Housing

The job growth forecast was translated into population growth using an analysis of residents per job, population to job ratio growth, and demographic trends over the last twenty years. Housing was derived from population

using an analysis of trends for household size based on sex, race and ethnicity as well as age.

The Monterey Bay Area has more residents per job than the national average and that trend is expected to continue to 2045. The population projections were derived by anticipating that the growth of the regional population-to-job ratio will move in line with the national trend as it has in the past, even though the ratio itself is higher. Based on the high population-to-job, the trending growth line and the demographics of the region, the regional population is projected to increase from 762,676 in 2015 to 896,776 in 2045 for an increase of nearly 18 percent, or 134,535 residents.

Projections for housing are derived from population estimates using demographic profiles containing data on gender, age, race and ethnicity to determine household formation rates for each category. These profiles and more information on the calculations for jobs, housing and population are included in Appendix A.

Table 1-1a: Employment Monterey County Coastal

Monterey County - Coastal	2020	2025	2030	2035	2040	2045
Regional Total	406,280	410,017	418,132	425,845	434,147	442,824
Monterey County Total	243,015	245,054	249,613	253,918	258,553	263,437
Carmel-By-The-Sea	3,566	3,593	3,674	3,752	3,833	3,915
Del Rey Oaks	748	753	774	794	815	834
Marina	6,548	6,621	6,765	6,899	7,055	7,217
Monterey	40,989	41,527	42,506	43,452	44,465	45,509
Pacific Grove	8,016	8,061	8,152	8,244	8,343	8,445
Sand City	2,092	2,102	2,151	2,188	2,224	2,259
Seaside	10,476	10,589	10,833	11,062	11,290	11,543

Table 1-1b: Employment Monterey County Inland

Monterey County - Inland	2020	2025	2030	2035	2040	2045
Regional Total	406,280	410,017	418,132	425,845	434,147	442,824
Monterey County Total	243,015	245,054	249,613	253,918	258,553	263,437
Gonzales	6,326	6,382	6,533	6,660	6,788	6,920
Greenfield	7,882	7,948	8,061	8,177	8,298	8,423
King City	8,195	8,248	8,371	8,511	8,669	8,832
Salinas	78,874	79,577	81,079	82,505	84,044	85,683
Soledad	9,010	9,079	9,161	9,235	9,333	9,462
Balance of County	60,293	60,574	61,553	62,439	63,396	64,395

Table 1-1c: Employment San Benito County

San Benito County	2020	2025	2030	2035	2040	2045
Regional Total	406,280	410,017	418,132	425,845	434,147	442,824
San Benito County Total	23,263	23,572	24,203	24,802	25,475	26,126
Hollister	15,492	15,728	16,207	16,655	17,121	17,613
San Juan Bautista	557	569	580	588	603	612
Balance of County	7,214	7,275	7,416	7,559	7,751	7,901

Table 1-1d: Employment Santa Cruz County

Santa Cruz County	2020	2025	2030	2035	2040	2045
Regional Total	406,280	410,017	418,132	425,845	434,147	442,824
Santa Cruz County Total	140,002	141,391	144,316	147,125	150,119	153,261
Capitola	12,250	13,276	13,633	12,902	13,181	13,454
Santa Cruz	43,865	44,317	45,594	46,863	48,203	49,636
Scotts Valley	10,109	10,185	10,345	10,489	10,637	10,797
Watsonville	28,514	28,765	29,156	29,505	29,896	30,303
Balance of County	45,264	45,748	46,588	47,366	48,202	49,071

Source: AMBAG 2022 Regional Growth Forecast

Table 1-2: Population

Geography	2015	2020	2025	2030	2035	2040	2045	Compound Annual Growth Rate	Change Over Forecast Period
AMBAG Region	762,241	774,729	800,726	824,992	842,189	857,828	869,776	0.46%	12.27%
Monterey County	430,310	441,143	452,761	467,068	476,028	483,884	491,443	0.43%	11.40%
Carmel-By-The-Sea	3,854	3,949	3,946	3,954	3,964	3,974	3,984	0.04%	0.89%
Del Rey Oaks	1,663	1,662	1,693	1,734	1,859	2,330	2,650	1.88%	59.45%
Gonzales	8,441	8,506	9,650	13,492	14,630	15,398	15,711	2.48%	84.70%
Greenfield	17,172	18,284	19,342	19,734	19,961	20,202	20,433	0.45%	11.75%
King City	13,736	14,797	15,376	16,101	16,689	16,881	17,064	0.57%	15.32%
Marina	21,057	22,321	23,723	25,126	26,713	28,433	30,044	1.20%	34.60%
Monterey	28,086	28,170	28,044	28,650	29,032	29,342	29,639	0.20%	5.21%
Pacific Grove	15,460	15,265	15,290	15,395	15,530	15,676	15,817	0.14%	3.62%
Salinas	158,059	162,222	166,226	170,459	173,393	175,358	177,128	0.35%	9.19%
Sand City	361	385	430	516	756	1,012	1,198	4.65%	211.17%
Seaside	33,815	33,537	34,497	35,107	35,634	36,582	38,316	0.53%	14.25%
Soledad	24,597	25,301	26,112	26,824	27,697	28,419	29,133	0.57%	15.15%
Balance of County	104,009	106,744	108,432	109,976	110,170	110,277	110,326	0.13%	3.36%
San Benito County	58,138	62,353	69,324	73,778	77,638	80,788	83,366	1.17%	33.70%
Hollister	37,314	40,646	42,604	43,327	44,421	45,345	45,599	0.46%	12.19%
San Juan Bautista	1,945	2,112	2,269	2,315	2,374	2,410	2,436	0.57%	15.34%
Balance of County	18,879	19,595	24,451	28,136	30,843	33,033	35,331	2.39%	80.31%
Santa Cruz County	273,793	271,233	278,641	284,146	288,523	293,156	294,967	0.34%	8.75%
Capitola	10,224	10,108	10,485	10,794	10,957	11,049	11,126	0.38%	10.07%
Santa Cruz	64,223	64,424	68,845	72,218	75,257	78,828	79,534	0.85%	23.45%
Scotts Valley	11,496	11,693	11,718	11,837	11,867	11,868	12,010	0.11%	2.71%
Watsonville	52,410	51,515	52,918	54,270	55,138	55,786	56,344	0.36%	9.37%
Balance of County	134,990	133,493	134,675	135,027	135,304	135,625	135,953	0.07%	1.84%

Source: AMBAG 2022 Regional Growth Forecast

Table 1-3: Housing Units

Geography	2015	2020	2025	2030	2035	2040	2045	Compound Annual Growth Rate	Change Over Forecast Period
AMBAG Region	262,660	267,812	277,645	288,386	296,352	301,307	304,900	0.52%	13.85%
Monterey County	139,177	141,764	146,716	153,852	159,100	162,612	165,328	0.62%	16.62%
Carmel-By-The-Sea	3,417	3,437	3,437	3,442	3,450	3,453	3,459	0.03%	0.64%
Del Rey Oaks	741	741	762	809	848	1,052	1,195	1.93%	61.27%
Gonzales	1,987	1,987	2,399	3,630	4,182	4,474	4,626	3.44%	132.81%
Greenfield	3,794	3,981	4,359	4,766	5,047	5,164	5,238	1.10%	31.57%
King City	3,283	3,432	3,672	4,002	4,282	4,356	4,403	1.00%	28.29%
Marina	7,334	7,784	8,277	8,837	9,265	9,521	9,693	0.88%	24.52%
Monterey	13,637	13,705	13,705	13,920	14,209	14,402	14,549	0.24%	6.16%
Pacific Grove	8,184	8,201	8,214	8,267	8,336	8,400	8,463	0.13%	3.19%
Salinas	43,001	43,411	45,552	48,673	50,968	52,229	53,150	0.81%	22.43%
Sand City	176	189	198	228	333	446	526	4.18%	178.31%
Seaside	10,913	10,920	11,437	11,925	12,248	12,604	13,192	0.76%	20.81%
Soledad	3,927	4,137	4,433	4,733	5,024	5,240	5,426	1.09%	31.16%
Balance of County	38,783	39,839	40,271	40,620	40,908	41,271	41,408	0.15%	3.94%
San Benito County	18,262	19,913	21,721	23,333	24,773	25,452	25,775	1.04%	29.44%
Hollister	10,757	11,917	12,501	13,177	13,701	14,054	14,122	0.68%	18.50%
San Juan Baustista	750	819	878	918	951	965	975	0.70%	19.05%
Balance of County	6,755	7,177	8,342	9,238	10,121	10,433	10,678	1.60%	48.78%
Santa Cruz County	105,221	106,135	109,208	111,201	112,479	113,243	113,797	0.28%	7.22%
Capitola	5,537	5,554	5,786	5,970	6,009	6,017	6,017	0.32%	8.34%
Santa Cruz	23,535	23,954	24,988	25,578	25,974	26,295	26,525	0.41%	10.73%
Scotts Valley	4,691	4,739	4,798	4,846	4,869	4,887	4,930	0.16%	4.03%
Watsonville	14,131	14,226	14,829	15,629	16,108	16,347	16,519	0.60%	16.12%
Balance of County	57,327	57,662	58,807	59,178	59,519	59,697	59,806	0.15%	3.72%

Source: AMBAG 2022 Regional Growth Forecast

Goals & Policies

AMBAG began developing the 2045 MTP/SCS when the Board of Directors adopted the following goals and policy objectives:

- Access and Mobility – Provide convenient, accessible, and reliable travel options while maximizing productivity for all people and goods in the region.
- Economic Vitality – Raise the region’s standard of living by enhancing the performance of the transportation system.
- Environment – Promote environmental sustainability and protect the natural environment.
- Healthy Communities – Protect the health of our residents; foster efficient development patterns that optimize travel, housing, and employment choices and encourage active transportation.
- Social Equity – Provide an equitable level of transportation services to all segments of the population.
- System Preservation and Safety – Preserve and ensure a sustainable and safe regional transportation system.

This framework of goals and policy objectives was used to guide the development of the 2045 MTP/SCS. Performance measures were established to evaluate how well the 2045 MTP/SCS performs in each of these areas.

Plan Overview

The 2045 MTP/SCS is a living document that must be updated to reflect the most current information and conditions and remain relevant and useful. Updating the Plan requires an examination of the progress the region is making, not just in terms of delivering projects, but also in terms of meeting the region’s vision, goals, and objectives. The 2045 MTP/SCS complies with the Clean Air Act and the region is in attainment for air quality conformity.

Coordination

AMBAG is the federally designated metropolitan planning organization (MPO) for the counties of Monterey, San Benito, and Santa Cruz. As the MPO, AMBAG develops the 2045 MTP/SCS and updates it every four years through a bottom-up process involving numerous stakeholders. Transportation investments in the Monterey Bay Area that receive state and federal funds or require federal approvals must be consistent with the MTP/SCS and included in AMBAG’s Metropolitan Transportation Improvement Program (MTIP). The MTIP is a four-year program and represents the near-term commitments of the 2045 MTP/SCS.

The 2045 MTP/SCS is an update to the 2040 MTP/SCS which was adopted in 2018. AMBAG worked closely with stakeholders to develop a new growth forecast and an updated multimodal transportation network with land use patterns and strategies based on reasonably available revenues.

AMBAG developed the 2045 MTP/SCS in close coordination with its three regional transportation planning agencies (RTPAs). Each of the three counties in the Monterey Bay Area has a RTPA responsible for countywide transportation planning and implementation- the Transportation Agency for Monterey County, the Santa Cruz

County Regional Transportation Commission and the San Benito County Council of Governments. Each of the RTPAs prepare their own county level transportation plan and prioritizes projects for funding. AMBAG works very closely with the RTPAs to coordinate project planning and priorities. AMBAG also worked in close coordination with the region's transit operators, local jurisdictions, Caltrans, the Monterey Bay Area Resources District, state and federal resource agencies, local agency formation commissions and other special purpose public agencies.

Scenario Development and Evaluation

During the development of the 2045 MTP/SCS, AMBAG developed and evaluated scenarios that included various land use assumptions and transportation system improvements and investments to see how each scenario could achieve the GHG targets established by CARB for the tri-county region as well as other performance measures. Extensive outreach with partner agencies, local jurisdictions, key stakeholders and the public was ongoing throughout the 2045 MTP/SCS planning process through workshops and meetings, surveys and interactive tools.

Beginning in 2019, AMBAG began the technical update to the 2040 MTP/SCS. This planning effort began by gathering and updating critical data as well as working with local jurisdictions on growth forecasts for 2020, 2035 and 2045. The regional growth forecast was then used as the growth parameter for the updating the various transportation and land use scenarios for the 2045 MTP/SCS.

Utilizing input from the public and stakeholders, AMBAG updated the land use and transportation scenarios through 2045. AMBAG evaluated these scenarios using a set of transportation, environmental and equity performance measures approved by the Board of Directors. These MTP/SCS scenarios were refined with continued extensive input from partner agencies and key stakeholders as well as from community workshops held in spring 2021. The preferred scenario builds on the region's success over the last four years in implementing the previous MTP/SCS and moves the region forward in meeting mobility, integrated land use and transportation strategies, and other regional goals. The components of the 2045 MTP/SCS are described briefly in the next section and in more detail in the succeeding chapters of this document.

Strategies and Investments

The MTP/SCS sets forth an integrated approach to transportation investments, described in Chapter 2, that makes the most out of the existing transportation system by investing in system preservation and maintenance and strategic system expansion and transportation management strategies. These transportation investments will provide more travel choices for the region's residents and visitors.

In Chapter 3, the financial plan identifies the funding strategies that are considered to be reasonably available through 2045.

In Chapter 4, the SCS identifies a future land use and development pattern integrated with transportation networks, programs and strategies.

The performance measures for the 2045 MTP/SCS are included in Chapter 5. These metrics quantify the transportation, environmental, economic and equity benefits of the Plan.

The public participation plan for developing the 2045 MTP/SCS is described in Chapter 6 and a glossary is included in Chapter 7.

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2 Transportation Investments



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Introduction

This chapter sets forth the investments and strategies that constitute the 2045 MTP/SCS. Transportation investments should seek to both optimize the performance of the existing system as well as strategically expand the system. This includes improvements ranging from systems preservation, roadway, rail, bus, bicycle and pedestrian facilities, transportation demand management, and transportation systems management strategies. As a result, the region will have more travel choices via an efficient multimodal transportation system.

The existing regional network consists of 481 miles of highways, 1,060 miles of regional transit service, and more than 1,200 miles of regional arterials. When implemented, the improvements in the 2045 MTP/SCS will develop an improved multimodal network while maintaining the existing system.

The experience during the COVID-19 pandemic has reaffirmed the need for a transportation system that offers choices for traveling around the Monterey Bay region and the need to leverage technology in ways to improve flexibility and adaptability to changing future conditions and disruptions.

Existing System

The existing Monterey Bay Area transportation system is comprised of roadways, transit, rail, bicycle and pedestrian networks, airports and aviation, goods movement, and management strategies. The following chapter discusses the existing system and the Plan's investments for strategic expansion.

System Preservation

The Monterey Bay Area has invested billions of dollars into building and expanding the multimodal transportation system. This 2045 MTP/SCS places a high priority on protecting the region's existing system and ensuring that the transportation system is operated as safely, efficiently, and effectively as possible.

Safety

In 2012, Congress passed the Moving Ahead for Progress in the 21st Century Act (MAP-21), which requires states to develop safety performance targets. Congress then passed the Fixing America's Surface Transportation Act (FAST Act) in 2015, which further expanded the role of performance measures. The California Department of Transportation (Caltrans) originally developed a Strategic Highway Safety Plan in 2005 with an overarching goal to reduce the California roadway fatality rate to less than 1.0 fatality per 100 million vehicle miles traveled (VMT) by 2010. Caltrans updated the Strategic Highway Safety Plan in 2015 to incorporate these performance measures while setting various strategies that state agencies can implement to reduce fatalities and highlight complementary actions that can be implemented by regional and local governments.

The projects and programs included in the 2045 MTP/SCS aim to reduce collisions and fatalities by improving the overall safety of the system. MAP-21 and the FAST Act require AMBAG to set and monitor safety performance metrics for the region. In addition, by reducing security vulnerabilities throughout the transportation infrastructure in the Monterey Bay area, the overall strength of the transportation system will be improved. General system upgrades will keep the system in a state of good repair and improve emergency preparedness.

AMBAG, the Regional Transportation Planning Agencies (RTPAs) - the Transportation Agency for Monterey County, the Santa Cruz County Regional Transportation Commission and the San Benito Council of Governments - and various local, state, and federal agencies continue to work together to improve the safety and security of the transportation system. In addition, AMBAG will set and begin monitoring safety performance as federally required. Refer to Chapter 5 for more detailed information on performance management.

Strategic System Expansion

One of the 2045 MTP/SCS's primary goals is to reduce per capita greenhouse gas emissions over the next 25 years. However, the total demand to move people and goods will continue to grow due to population increases. A strategic expansion of the transportation system will provide the region with the mobility and accessibility its residents need. The 2045 MTP/SCS targets this expansion around bus transit, rail, key roadways and active transportation. These networks must be improved in order to provide the accessibility and connectivity required for a diverse population. Included in this chapter are descriptions of these strategic improvements with example projects. For a complete list of funded projects see the Regional Transportation Plans for each of the three counties.

AMBAG recognizes the importance of coordinating with Federal Land Management Agencies (FLMAs) before projects are programmed in the Transportation Improvement Program (TIP) and Statewide Transportation Improvement Program (STIP), and makes appropriate efforts to include the FLMAs in the transportation planning and project programming process on infrastructure and connectivity needs related to access routes and other public roads and transportation services that connect to Federal lands.

Highways and Local Arterials

The three counties and 18 incorporated cities in the region are responsible for an extensive network of county and city streets and roads. Some of these roadways are regionally significant freeways, expressways, arterials and collectors, which not only serve local traffic, but also provide access and mobility for long distance trips within the region as well as trips that start or end outside of the region.

A regionally significant project refers to a transportation project that is on a facility which serves regional transportation needs (such as access to and from the area outside the region; major activity centers in the region; major planned developments such as new retail malls, sports complexes, or employment centers; or transportation terminals) and would normally be included in the modeling of the metropolitan area's transportation network. At a minimum, this includes all principal arterial highways and all fixed guideway transit facilities that offer a significant alternative to regional highway travel. (23 CFR § 450.104)

Projects for these roadways are included within the 2045 MTP/SCS and are included in the Project List (Appendix C). The 2045 MTP/SCS provides \$3.5 billion for highway investments and \$4.0 billion for local streets and roads. The majority of the roadway funding is for operations and maintenance. Overall, 42% of the region's local streets and roads projects include bike and pedestrian improvements, representing \$1 billion in local streets and roads funding.

Highways

The Monterey Bay Area includes many highways that connect people between the three counties as well as outside the region. All of these highways need ongoing upkeep and improvements to continue providing safe access to all areas of the region. Figure 2-1 illustrates the 2045 Highway Network. However, the region cannot afford to fund all needed highway projects or there would be no revenue remaining for other transportation modes. The following are examples of regionally significant highway projects included in the 2045 MTP/SCS:

- U.S. 101 corridor
- SR 1, SR 68 and SR 156 West improvements

Figure 2-1: 2045 Regional Highway Network



- SR 25 improvements
- SR 156 widening
- SR 1 bus on shoulder lane improvements (Santa Cruz)

Local Arterials

Local streets and roads – including curbs and gutters, sidewalks, access ramps, bicycle paths, stop signs and traffic signals – are a critical component of the region’s transportation system. The majority of travel, whether by car, bicycle, bus or foot, is done on local streets and roads. Please refer to the respective RTPA Regional Transportation Plans for additional information on regionally and nationally important local streets and roads.

Some examples of regionally significant projects on local arterials include:

- Marina – Salinas Multimodal (bus/roadway) Corridor Improvements
- U.S. 101/5th Street Operations Improvements

Transit

The region has three RTPAs which are responsible for long term transit planning for the Monterey Bay Area. This planning function is performed in partnership with the region’s three transit operators: Monterey-Salinas Transit (MST), Santa Cruz Metropolitan Transit District (METRO), and San Benito Transit (County Express). Additional public transit providers include Amtrak and six paratransit operators.

A key focus of this 2045 MTP/SCS is to invest in an ambitious transit network that significantly expands the role that transit plays in meeting the region’s mobility needs. The 2045 MTP/SCS incorporated transportation and transit enhancement activities as required by the FAST Act.

The 2045 MTP/SCS provides \$4.0 billion in transit capital and operating investments. Over half of this funding is consumed by the cost of operating and maintaining the transit system. The balance pays for capital expenses such as purchasing new vehicles, infrastructure associated with adding routes and stations to the bus and rail system, building new storage and maintenance facilities, and improvements to help buses move more quickly through traffic. Figure 2-2 illustrates the 2045 Transit Network, including bus rapid transit and rail.

Bus Transit

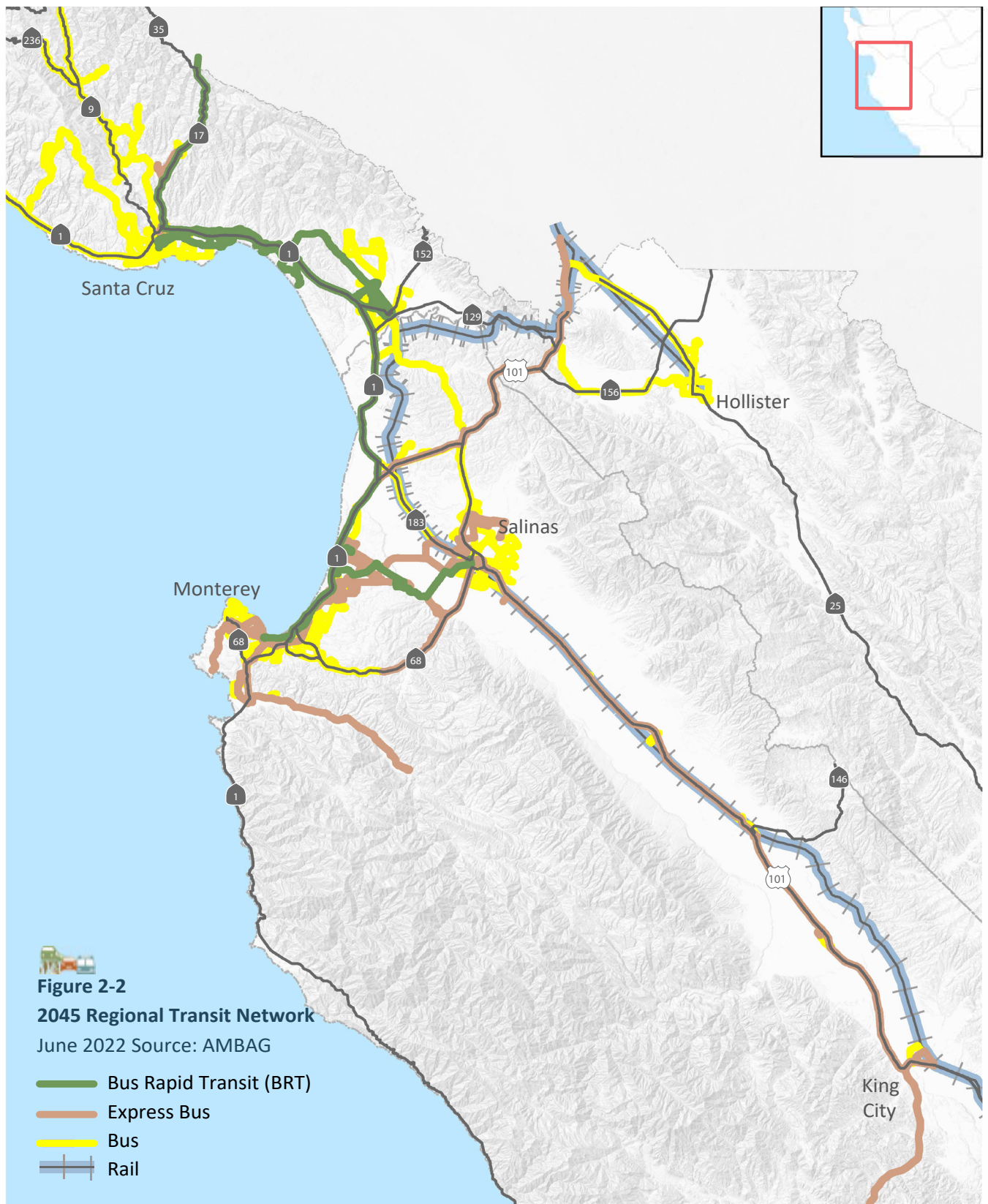
Bus transit is provided by MST, METRO and County Express. This Plan not only provides operations funding for transit agencies to expand their service, but also includes a land use pattern that dramatically increases the number of jobs within a ½ mile of transit, thereby encouraging more people to use the system. In addition to public transit providers, Greyhound Bus Lines and Amtrak provide longer distance intercity service. Employee buses and airport shuttles are also part of the transportation system.

Bus Rapid Transit and Express Service

The 2045 MTP/SCS allocates additional funding to bus transit in the region. Fixed route bus lines in the region are continuously evaluated and adjusted. In addition, new bus rapid transit (BRT) and express routes are planned in many key regional corridors, including:

- Marina – Salinas Multimodal Corridor
- SURF! Busway and Bus Rapid Transit Project

Figure 2-2: 2045 Regional Transit Network



- Salinas Bus Rapid Transit
- Monterey South County Express Bus Transit Enhancements
- Hollister to Salinas and Watsonville
- Bus on SR 1 Shoulder Project

Bus rapid transit is often designed for longer distance and higher speed service, usually on a dedicated facility, and may also include higher frequency service particularly during commute hours. Many of the new BRT routes in the region have 15 minute peak service planned whereas express buses often have 30 minute or more peak service frequencies. Bus rapid transit also could serve as a precursor to future planned rail services. When a dedicated facility is not available, BRT lite or express service can still serve the same route with high speeds by utilizing transit priority infrastructure such as queue jumps. BRT lite is bus rapid transit without the benefit of a dedicated lane. By utilizing any combination of the other features of BRT, the BRT lite still provides time savings over regular express and local transit services. Features of BRT can include, but are not limited to: dedicated bus lanes, queue jumps, signal prioritization, off-board fare systems, level boarding stations and real-time arrival information systems.

A **queue jump** is a type of roadway geometry used to provide preference to buses at intersections. It consists of an additional travel lane on the approach to a signalized intersection. This lane is often restricted to transit vehicles only. A queue jump lane is usually accompanied by a signal which provides a phase specifically for vehicles within the queue jump. Vehicles in the queue jump lane get a “head-start” over other queued vehicles and can therefore merge into the regular travel lanes immediately beyond the signal. The intent of the lane is to allow the higher capacity vehicles to cut to the front of the queue, reducing the delay caused by the signal and improving the operational efficiency of the transit system.

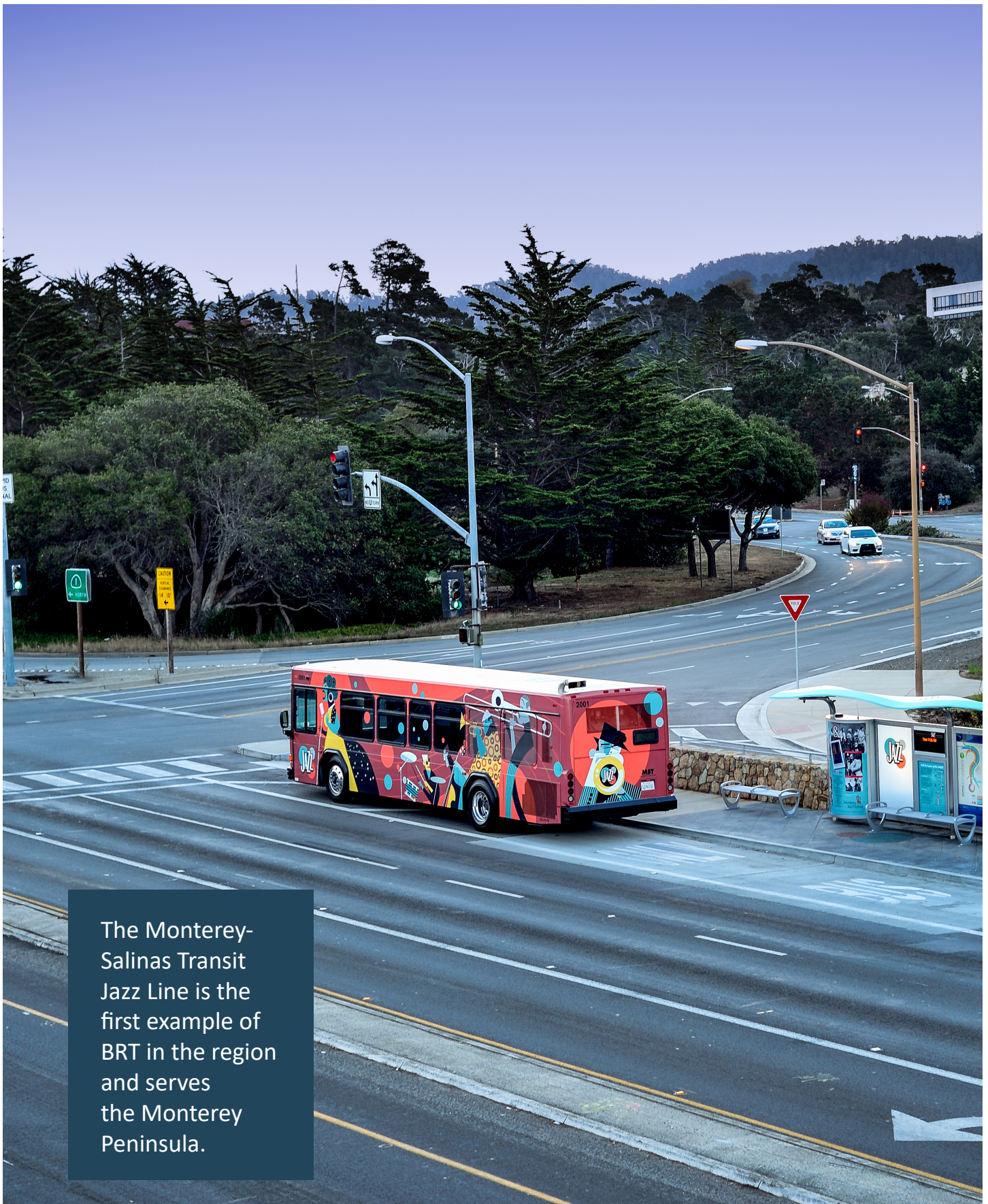
Assembly Bill (AB) 946 (Stone, 2013) grants MST and Santa Cruz METRO legislative authority to evaluate bus-on-shoulder solutions to alleviate traffic congestion along state highways similar to other programs implemented throughout the country. Using bus on shoulders is a low cost strategy to improve bus running times and reliability for transit systems.

In 2018, MST and Santa Cruz METRO completed a joint feasibility study for Bus on Shoulder Transit Operations on Highway 1 and the rail right-of-way in Monterey County. The study led to the implementation of the SR 1 Bus on Shoulder Project in Santa Cruz County.

Expanded Local Service

A system of high frequency local bus services on key corridors will provide both improved local service plus access to BRT and rail services. Some examples of regionally significant local transit service include:

- South County (Monterey) transit enhancements- including express or commuter based service
- University of California Santa Cruz (UCSC) & inter-city bus frequency improvements
- System wide operations funding
- Bus fleet replacement with alternative propulsion- specifically battery electric transit buses



The Monterey-Salinas Transit Jazz Line is the first example of BRT in the region and serves the Monterey Peninsula.



Travel by transit offers many benefits to the performance of the regional transportation network in the Monterey Bay Area region. First, transit provides an opportunity for reducing VMT, through shifts from low occupancy modes such as driving alone to a very high occupancy mode of travel. Second, for commute trips, which tend to occur at peak periods of travel demand when congestion is highest, transit service can provide substantial congestion relief. High quality transit service also provides mobility for both transit dependent and choice riders, residents and employees in higher density and mixed use areas where auto travel can be impractical.

Commuters are more likely to take transit if they can easily walk or bike from their home or job to a transit stop or station. As a result, walking and cycling infrastructure improvements are often an effective way to support transit use. Good intermodal connections, such as convenient park-and-ride locations, on-board bike racks, secure bicycle parking, safe and pleasant access routes, and shortcuts can enhance the appeal of both non-motorized and transit modes. Additional information on park-and-ride locations is included in the RTPA's county-level Regional Transportation Plans.

Demand Response Service

In addition to the three fixed route bus operators, there are several small demand-responsive public bus and van transit systems operate in the region:

- San Benito County Express
- MST RIDES
- Greenfield Auto Lift
- King City Transit
- METRO ParaCruz
- Community Bridges Lift Line

A full list of providers is included in the Coordinated Plan.

Coordinated Plan

A Public Transit-Human Services Transportation Plan (Coordinated Plan) was prepared by AMBAG for the tri-county region as required by federal statutes. The Coordinated Plan identifies local transit needs for the elderly, disabled, and low income, and facilitates applications for the Federal Transit Administration (FTA) Section 5310 grant program. It also includes strategies and activities to address identified gaps in the transit network and achieve efficiencies in service delivery. The Coordinated Plan, last adopted by AMBAG in October 2018, is currently being updated and will be completed by Fall 2022.

Passenger Rail

Rail projects are an important component of the regional transportation network that enhance mobility opportunities for the region's diverse population and lead to economic vitality for the region. The planned rail services complement each other and result in reducing auto trips on regional highways.

California State Rail Plan

Federal law requires that states develop state rail plans no less frequently than every five years to be eligible for federal funding for high-speed rail and intercity passenger rail programs. The law also encourages states to develop strategies and policies for enhanced passenger and freight rail services that benefit the public. The 2013 California State Rail Plan makes the state compliant with 49 U.S.C. Sec. 22102 concerning state rail plans and state rail administration.

The California State Rail Plan establishes a statewide vision and objectives, sets priorities, and develops implementation strategies to enhance passenger and freight rail service in the public interest. It provides a comprehensive listing of long range investment needs for California's passenger and freight infrastructure and supports the state's goal of developing an integrated, multimodal transportation network.

Amtrak

The only regular rail passenger service currently operating in the region is provided by Amtrak, the most popular long distance passenger train in the United States. The Coast Starlight, which connects Los Angeles to Seattle, stops in Salinas, the only Amtrak rail station in the region. This route operates one train in each direction daily. In the future, Amtrak will expand service by offering Coast Starlight stops at new stations in Soledad and King City.

Rail passengers can ride the Amtrak bus to connect to the Capitol Corridor route, which runs daily between San Jose and Sacramento. There are also three round trip connecting bus services between the state Capitol and Monterey County daily. Each major area of Monterey County – the Monterey Peninsula, Salinas, and the South Monterey County cities – is served by this connecting bus service. The Amtrak Capitol Corridor service provides four round trips between San Jose and Sacramento on weekdays and six round trips on weekends. The Capitol Corridor connecting bus service to Monterey County serves Watsonville, Salinas, California State University Monterey Bay (CSUMB) and four locations within the City of Monterey.

Commuter and Light Rail

The Transportation Agency for Monterey County (TAMC) and the Santa Cruz County Regional Transportation Commission (SCCRTC) are working to bring rail service to Monterey and Santa Cruz Counties, so that residents can use rail to travel to jobs, education and entertainment.

The Monterey County Rail Extension project extends passenger rail service from Santa Clara County south to Salinas. This is a transformative project that will revitalize the downtown Salinas train station and create new multimodal transportation hubs for the disadvantaged communities of Pajaro and Castroville.

In 2021, TAMC adopted the Monterey Bay Area Rail Network Integration Study. The purpose of this study is to lay the groundwork for implementing the 2018 California State Rail Plan in the Monterey Bay Area by determining the optimal options for: rail connectivity and operations, equipment needs, governance, and community benefits for service between Monterey County and Santa Clara County, Monterey and Santa Cruz, and the Coast Rail Corridor.

In 2012, the Santa Cruz County Regional Transportation Commission (SCCRTC) purchased a rail line extending almost 32 miles from Davenport to Pajaro. The SCCRTC evaluated the rail right-of-way for the most effective and efficient use as a transportation facility. In 2014, the SCCRTC conducted a passenger rail feasibility study which evaluated the feasibility of several passenger rail service scenarios. As a follow up, the SCCRTC conducted an Unified Corridor Study which will evaluate the transportation uses of the rail right-of-way along with improvements to the parallel corridors of Soquel Drive/Avenue and Highway 1. The goal of this effort is to determine the best combination of projects and improvements along each route so that they complement one another and enhance the mobility in the region. The study was completed in December 2018.

In late 2019, SCCRTC initiated the Transit Corridor Alternatives Analysis (TCAA) to evaluate public transit investment options that provide an integrated transit network for Santa Cruz County utilizing all or part of the length of the rail right-of-way as a dedicated transit facility. The ultimate goal of the TCAA is to identify one locally-preferred transit alternative that meets the needs of the diverse community for which it will serve. In February 2021, SCCRTC accepted the TCCA that selected the Electric Passenger Rail as the locally preferred alternative.

Active Transportation

For the purposes of the 2045 MTP/SCS, active transportation refers to bicycling and walking. Walking and bicycling are essential parts of the region's transportation system, are low cost, do not emit greenhouse gases, can help reduce roadway congestion, and increase health and quality of life of residents. In addition, these types of facilities can often be implemented as part of maintenance and operations projects making this kind of investment very cost effective.

As the region works toward reducing congestion and greenhouse gases, walking and bicycling will become more essential to meet the region's future needs. To make active transportation a more attractive and feasible mode of travel for the different users in the region, additional infrastructure improvements are needed. Given that all trips, including automobile trips, start with walking, it is important to ensure that the sidewalks and streets are accommodating to all users. In all, the 2045 MTP/SCS's active transportation improvements total \$1 billion. In addition, nearly one-half of the local streets and roads projects contain active transportation components, totalling approximately \$1 billion.

Bicycle and Pedestrian Facilities

When Caltrans and local jurisdictions provide bicycle and pedestrian amenities, they not only are encouraging recreational opportunities but are also providing an alternative to driving. In the region, the RTPAs administer the distribution and use of bicycle and pedestrian funds as provided for under the Transportation Development Act (TDA).

TAMC and SCCRTC provide ongoing bicycle programs covering facilities planning, policy development, education/promotion, and staffing of the respective county Bicycle Advisory Committees. Program efforts are focused on coordination and incorporation of bicycle planning and promotion into all planning activities including general plan development, capital improvement programming, development review, environmental review, and other transportation system management efforts. Some examples of bicycle and pedestrian projects

around the region are:

- Monterey Bay Sanctuary Scenic Trail
- Carmel to Pebble Beach Bicycle Facility
- Bicycle sharing, lockers, bus shelters and wayfinding signs
- Sidewalk enhancements
- Bicycle and pedestrian plans
- Fort Ord Regional Trail and Greenway

Bicycle Network

A considerable bicycle network exists, particularly in the urbanized portions of the region. Although there is a general lack of continuity in bike lanes striped on the region's street network, progress has been made in planning and funding bikeway improvements as well as bicycle supportive facilities. TAMC and SCCRTC are developing a Monterey Bay Sanctuary Scenic Trail. Continued emphasis on improving bicycle routes that safely connect employment centers and residential locations will increase commuter bicycle use. A map of the regional bicycle network is shown in Figure 2-3.

Bikeways in the region are classified in four categories:

- *Class I Bikeway* – Typically called a “bike path” or “multiuse path,” a Class I bikeway provides bicycle travel on a right-of-way completely separated from any street or highway. Class I bikeways are not for the exclusive use of bicyclists, and can be used by pedestrians, joggers, and other non-motorized users.
- *Class II Bikeway* – Often referred to as a “bike lane,” a Class II bikeway provides a striped lane for one-way travel on a street or highway.
- *Class III Bikeway* – Generally referred to as a “bike route,” a Class III bikeway may include signage or sharrows and provides for shared use with vehicles.
- *Class IV Bikeway* – Often referred to as a “Cycle Track,” a Class IV bikeway provides bicycle travel in designated lanes on roadways which are also separated from traffic by barricades, such as bollards or curbs.

Pedestrian Facilities

Pedestrian travel is a vital part of the transportation, economic and social life of the Monterey Bay Area, and pedestrian amenities — such as appropriately sized sidewalks, crosswalks, curb cuts, landscaping, and benches — are seen as beneficial additions that make communities walkable, friendly, and livable.

Pedestrian facilities including sidewalks, streets, and trails are fundamental to the functioning of Monterey Bay Area neighborhoods. Cities that promote walking in all its forms are promoting healthy neighborhoods and communities. Local jurisdictions are working to achieve an effective pedestrian network by implementing pedestrian infrastructure improvements in conjunction with new and redeveloped streets, and working closely with the public to identify where existing gaps in pedestrian facilities exist. In some areas, local jurisdictions are implementing traffic calming projects to slow vehicular traffic and create more attractive pedestrian environments.

The region is placing more emphasis on walking as a viable, inexpensive, nonpolluting, and healthy way to travel. Most pedestrian infrastructure is in the form of sidewalks; however, there are also many significant trails in the

region. Multipurpose trails are separated from roadways and are usually shared by more than one user type including rollerbladers, bicyclists, skateboarders, pedestrians, horses, and joggers.

Opportunities for additional shared use facilities may be present in the region. For example, Pacific Gas and Electric (PG&E) owns and operates pipelines that distribute natural gas to most communities throughout the region via 12" and 20" pipelines. Many of these pipelines have 25 to 100 foot easements that could be utilized for pedestrian and bicycle paths. In addition, PG&E has easements throughout the state for electrical transmission lines, some of which have been made into linear greenbelts with bicycle and pedestrian paths.

Complete Streets - Streets for All Users

Complete streets are streets for everyone. They are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists, and transit riders of all ages and abilities. Complete streets make it easy to cross the street, walk to shops, and bicycle to work. They allow buses to run on time and make it safe for people to walk to and from bus stops and train stations.

Making these travel choices more convenient, attractive, and safe means people do not need to rely solely on automobiles. They can replace frustrating trips in their cars with bus rides or heart healthy bicycle and walking trips. Complete streets improves the efficiency and capacity of existing roads too, by moving people in the same amount of space – think of all the people who can fit on a bus or streetcar versus the same amount of people each driving their own car. Getting more productivity out of the existing road and public transportation systems is vital to reducing congestion.

Complete streets are particularly prudent as more communities are tightening their budgets and looking to ensure long term benefits from investments. An existing transportation budget can incorporate Complete streets projects with little to no additional funding, accomplished through re-prioritizing projects and allocating funds to projects that improve overall mobility. Many of the ways to create more complete roadways are low cost, fast to implement and high impact.

Source: Smart Growth America, <http://www.smartgrowthamerica.org/>

Complete Streets

The Complete Streets Act of 2008 (AB 1358) requires cities and counties to incorporate the concept of complete streets in their general plan updates to ensure that transportation plans meet the needs of all users of the roadway system. AMBAG supports and encourages implementation of complete streets policies in the 2045 MTP/SCS. The Regional Complete Streets Guidebook, included as Appendix H, was developed by staff from the Transportation Agency for Monterey County, the San Benito County Council of Governments and the Santa Cruz County Regional Transportation Commission. Regional agencies will work with local jurisdictions as they implement complete streets strategies within their jurisdiction by providing information and resources to support local planning activities. Complete streets must be context sensitive to adjacent land uses in order to function well for diverse roadway users. Recognizing that roadways have primarily been designed to serve the automobile, regional complete streets efforts highlight bicycle and pedestrian access as an essential design objective. In addition, the California State Pedestrian and Bicycle Plan, *Toward an Active California*, lays out foundational policies and actions that Caltrans and its partner agencies will take to achieve the department's ambitious statewide goals to double walking and bicycling trips by 2020.

Figure 2-3: 2045 Regional Bicycle Network



Safe Routes to School

SAFETEA-LU established the Safe Routes to School program to “enable and encourage primary and secondary school children to walk and bicycle to school” and to support infrastructure related and educational projects that are geared toward providing a safe, appealing environment for walking and bicycling. Safe Routes to School programs can play a critical role in eliminating some of the vehicle trips that occur during peak periods to drop off or pick up students by ensuring safe routes to bike or walk to school.

Under MAP-21, and continued in the FAST Act, Safe Routes to School has been combined with other bicycling and walking programs into a new program called Transportation Alternatives. There is less funding available for Transportation Alternatives than for the programs that were consolidated and there is no longer dedicated funding for Safe Routes to School.

TAMC created a Safe Routes to Schools Program that offers tools, programming, and resources to schools, guardians, and communities aimed at improving safety and traffic around schools. The goal of the program is to keep every child safe and healthy by reducing the number of students involved in collisions to zero. Efforts of TAMC’s Safe Routes to Schools Program are focused on reducing traffic around schools, improving safety for kids during their commute to school, encouraging kids to be more active, and connecting communities with resources to support safe routes to schools. One of the core pillars of the Safe Routes to School Program is the educational trainings that are led for youth. The programming is notably called “Walk Smart” and “Bike Smart,” whereby students are training on the habits of safe walking and bicycling habits to facilitate an increase in walking and cycling among youth while simultaneously reducing the rate of crashes involving youth.

Trails

The Monterey Bay Sanctuary Scenic Trail (MBSST) is planned to be a multiuse recreation and interpretive pathway that links existing and newly established trail segments into a continuous coastal trail around the Monterey Bay. The MBSST Final Master Plan and Environmental Impact Report was adopted by SCCRTC in November 2013. The TAMC MBSST Final Master Plan was adopted in January 2008.

In addition to providing bicycle and pedestrian facilities, interpretive features educate users of the trail about the natural and cultural resources of the Monterey Bay National Marine Sanctuary and its environs. The trail is located and designed so visitors can explore and enjoy the coastal communities of Santa Cruz and Monterey Counties, while respecting residential, agricultural, and environmentally sensitive surroundings along the trail.

The approximately 110 mile coastal trail corridor provides public access along the Monterey Bay from Santa Cruz to Monterey. The trail is envisioned for pedestrians and bicyclists, with each trail section dictated by natural landforms and features, existing land uses, and desired destinations. The project links existing local trails, bridging the gaps between them. Sections of the MBSST network will be included in the California Coastal Trail, a 1,200 mile hiking trail which will eventually extend the entire length of the California Coast.

The Monterey Bay Sanctuary Scenic Trail incorporates the California Coastal Trail and includes coordination with the State Coastal Conservancy and Coastal Commission to implement the California Coastal Trail in the AMBAG region. Coordination continues to coordinate with coastal partner agencies to develop and accommodate the California Coastal Trail in the regional plan. Transportation partners are coordinating with local jurisdictions and congressional representatives to fund and construct trail segments identified in the Master Plan, which will be incorporated in a larger California Coastal Trail project being developed statewide. Refer to the MBSST Master Plans for more information.



Wide sidewalks with amenities not only makes the street more usable for all modes it also improves the attractiveness of the street.



Active transportation includes walking. Pedestrian crossings with textured pavers and short crossing distances improves safety.



Complete streets does not exclude planning for automobiles, rather it incorporates improvements that make it easier for all modes to coexist.



Active transportation includes bicycling. Separated facilities increase safety and therefore increase the possibility that people of all ages will use alternate modes of transportation.



Complete streets attract more people to get out of their cars. As people walk to their destination they are more likely to patronize other businesses along the way.



Active transportation includes bicycling to get to the bus. Accommodations on buses for bicycles is important so that people have more options to get to and from bus stops.

The Fort Ord Regional Trail and Greenway (FORTAG) will build approximately 28-miles of a paved bicycle and pedestrian access path through the former Fort Ord that will provide a safe, separated route connecting the Monterey Bay Sanctuary Scenic Trail with local parks, schools, shopping, and the new Fort Ord National Monument. The project will also connect residents in the cities Marina, Monterey, Del Rey Oaks, and Seaside with jobs, events, and classes at California State University Monterey Bay (CSUMB).

Aviation

Airports within the region function for movement into and out of the region for both people and goods. The major passenger airport in the region is the Monterey Regional Airport.

California Aviation System Plan

The California Aviation System Plan is a multi-element plan prepared by the Department of Transportation (Caltrans), Division of Aeronautics, with the goal of developing and preserving of airports responsive to the needs of the state. There are 14 public use airports in the Central Coast Region, the planning region for the California Aviation System Plan. This Plan considers the following Monterey Bay Area airports to be the region's highest priority facilities for enhancement:

- Hollister Municipal
- Watsonville Municipal
- Mesa Del Rey Municipal
- Salinas Municipal
- Marina Municipal

Enhancements to these airports would improve regional and state system capacity and safety.

Monterey Bay Area Airports

The region has six publicly owned civil aviation airports:

- Monterey Regional
- Salinas Municipal
- King City Municipal (Mesa del Rey)
- Marina Municipal
- Watsonville Municipal
- Hollister Municipal

Of these six, only the Monterey Regional Airport has scheduled air carrier service.

In addition to the publicly owned airports, several private airports operate in the region. Of these, the Frazier Lake Airpark is the only one that allows public use. The remainder of the privately owned airports are used for agricultural, business, and private purposes.

In addition, there are currently two operational military airfields in the Monterey Bay Area:

- Camp Roberts Army Airfield and Heliport
- Fort Hunter-Liggett Army Heliport.

Monterey Regional Airport

Monterey Regional Airport (MRY) has two parallel runways with the longest at 7,598 feet. There is a control tower and instrument landing capability. This airport is the major regional airport, with commercial freight, passenger traffic, military traffic, and general aviation needs. The facility is located north of SR 68 (Monterey-Salinas Highway) and east of the City of Monterey. The 498 acre airport is the only airport in California operated as a self-governing district, the Monterey Peninsula Airport District. In 2019, five commercial airlines served the airport for a total of 205,662 enplanements.

Primary air-carrier airports with annual enplanements over 10,000 are required to have an Airport Ground Access Improvement Program. State Routes 1 and 68 provide the primary ground access to the airport for both people and freight. MST provides public transit service from Monterey and Salinas to the airport, during daytime hours on Mondays through Saturdays, only. An airport limousine service and taxicabs also serve the airport. Many local hospitality industries provide their own shuttle services for guests. A new Master Plan and Airport Layout Plan were initiated in 2014 and completed in 2016. The Master Plan's environmental review was completed, and the Plan was adopted in 2018. Additional information on airport access can be found in the TAMC Regional Transportation Plan.

Salinas Municipal Airport

Salinas Municipal Airport is located three miles southeast of the City of Salinas on a 763 acre site. It has four runways with the longest at 6,004 feet. There is a control tower and instrument landing capability. Operated for general aviation purposes by the City of Salinas, 70,110 general aviation operations took place in 2019, with 158 based aircraft.

Mesa Del Rey Municipal Airport in King City

King City Municipal (Mesa del Rey) Airport is located north of King City on 214 acres. In 2019, it handled 7,862 general aviation operations with one 4,500 foot runway. There is neither a control tower nor instrument landing capability at this airport. A publicly owned airport, it is operated by the City of King for general aviation purposes and has 12 based aircraft. The airport is home to the Sean D. Tucker Academy that provides in-depth study of aircraft control. This is an advantage for the Mesa Del Rey Airport, which could prove to be beneficial to the patronage of the airport if widely promoted.

Marina Municipal

Marina Municipal Airport is located north of Reservation Road in the City of Marina on 845.5 acres of the former Fritzsche Army Airfield. This general aviation airport had an estimated 42,000 operations in 2019 on its one, 3,485 foot runway. The regional Airport Surveillance Radar is located northwest of this airport.

Watsonville Municipal

Watsonville Municipal Airport is located on a 330 acre site to the northwest of Watsonville. In 2019, there were an estimated 60,000 general aviation operations on two runways, the longest at 4,500 feet. There is no control tower but the airport has instrument landing capability. Operated by the City of Watsonville, this is the sole public use airport in Santa Cruz County, and is classified as a general transport airport serving general aviation and business jets.



Most of the local airports are small and do not have scheduled air carrier service (Watsonville Municipal Airport).



Much of the region's agricultural goods are currently transported by truck, though the MTP/SCS looks towards converting these trips to rail in the long term.

Hollister Municipal

Hollister Municipal Airport is located northwest of the City of Hollister on 343 acres. It services 87 aircraft and there were an estimated 57,489 operations in 2019. Hollister Municipal also has two runways, one 6,350 foot runway, and one 3,150 foot runway. There are no control tower or instrument landing capabilities at this airport. A publicly owned airport, it is operated by the City of Hollister for general aviation purposes.

Frazier Lake Airpark

Frazier Lake Airpark is the only privately owned airport in the region that is open to the general public. It is located 4 miles northwest of Hollister Municipal Airport. Frazier Lake Airpark has a 2,500 foot grass turf runway and a 3,000 foot water runway for sea planes. In 2019, there were 7,190 general aviation operations, and 90 based aircraft.

Airports Economic Impact Study

The Airports Economic Impact Study prepared by AMBAG in 2003, was designed to evaluate the economic impacts of each of the Monterey Bay region's six public airports on the local vicinity served by the airport and to provide a regional picture of the combined airports importance to the three county economy. The total direct, indirect and induced economic benefit of the six regional airports was estimated to be \$1.38 billion annually. The Monterey Bay Area's airports play an important role in the total regional economy, providing service to agriculture, tourism, government, emergency services and other business interests throughout the region.

Regional Airport System Plan

The Regional Airport System Plan (RASP) was completed by AMBAG in 2006. The RASP projects a moderate growth rate in aircraft operations as a result of increased activity in general aviation and a continuation of growth by air taxi services. In addition, projections recently prepared by Monterey Peninsula Airport District (MPAD) for the Monterey Regional Airport Master Plan forecasted continued increasing passenger enplanements over the next 20 years. With availability for increased operations, the existing general public airports in the region could absorb aircraft from other regions.

Goods Movement

The Central Coast is well known for the variety of agricultural products grown here. The Salinas Valley is commonly referred to as "America's Salad Bowl" due to the sheer amount of produce grown and exported to markets in other parts of the country and world.

Strawberries and other berries are key crops throughout the region, and are the number one crops by value in Monterey and Santa Cruz Counties. See Table 2-1 for a list of the region's top agricultural products by county. Lettuce, wine grapes, broccoli, and nursery products also are important agricultural products for the Central Coast. The region is a key producer of wine. Monterey County, for example, produced grapes for wine valued at \$248 million in 2018. Both Monterey and San Benito Counties are major producers of field crops, fruits and nuts, vegetable/row crops and livestock.

The agricultural industry is critical to the success of the regional economy and its health partly depends on the ability to move goods not just throughout the region but outside of the region. Agriculture relies on the connectivity and condition of highways, and local roads that connect crop production with buyer markets via major state routes and U.S. 101. Therefore, it is necessary for the health of the region that all the major roads, highways and railways carrying goods to and from crop production locations (such as U.S. 101, SR 46, SR 129, SR 152, SR 156 and SR 183) are maintained to support efficient delivery and shipment of goods. Figure 2-4

illustrates the Goods Movement Network. A summary of the various plans and studies that document the importance of goods movement to the region and the efforts to improve the delivery of agricultural products to consumer markets is discussed in this section.

The majority of the goods in the region are delivered to buyer markets via the highway and road network rather than railways. However, there is a recognized need for transitioning the Central Coast’s truck freight to rail freight in order to alleviate pressure on the region’s highways and roads as well as to reduce congestion and increase safety for all users of those roads.

Table 2-1: Top Regional Agricultural Crops (Millions/Year)

County	Top Crops (Millions)
Monterey	Berries, Strawberries, Fresh Market (\$746.1)
	Lettuce, Romaine (\$483.3)
	Lettuce, Head (\$436.0)
San Benito	Vegetables, Unspecified (\$39.9)
	Lettuce, Bulk Salad Products (\$21.1)
	Nursery Products, Misc (\$20.4)
Santa Cruz	Berries, Strawberries, Fresh Market (\$172.6)
	Berries, Raspberries (\$104.3)
	Flowers Cut, Unspecified (\$60.0)

Source: AMBAG, Central Coast California Commercial Flows Study, 2012

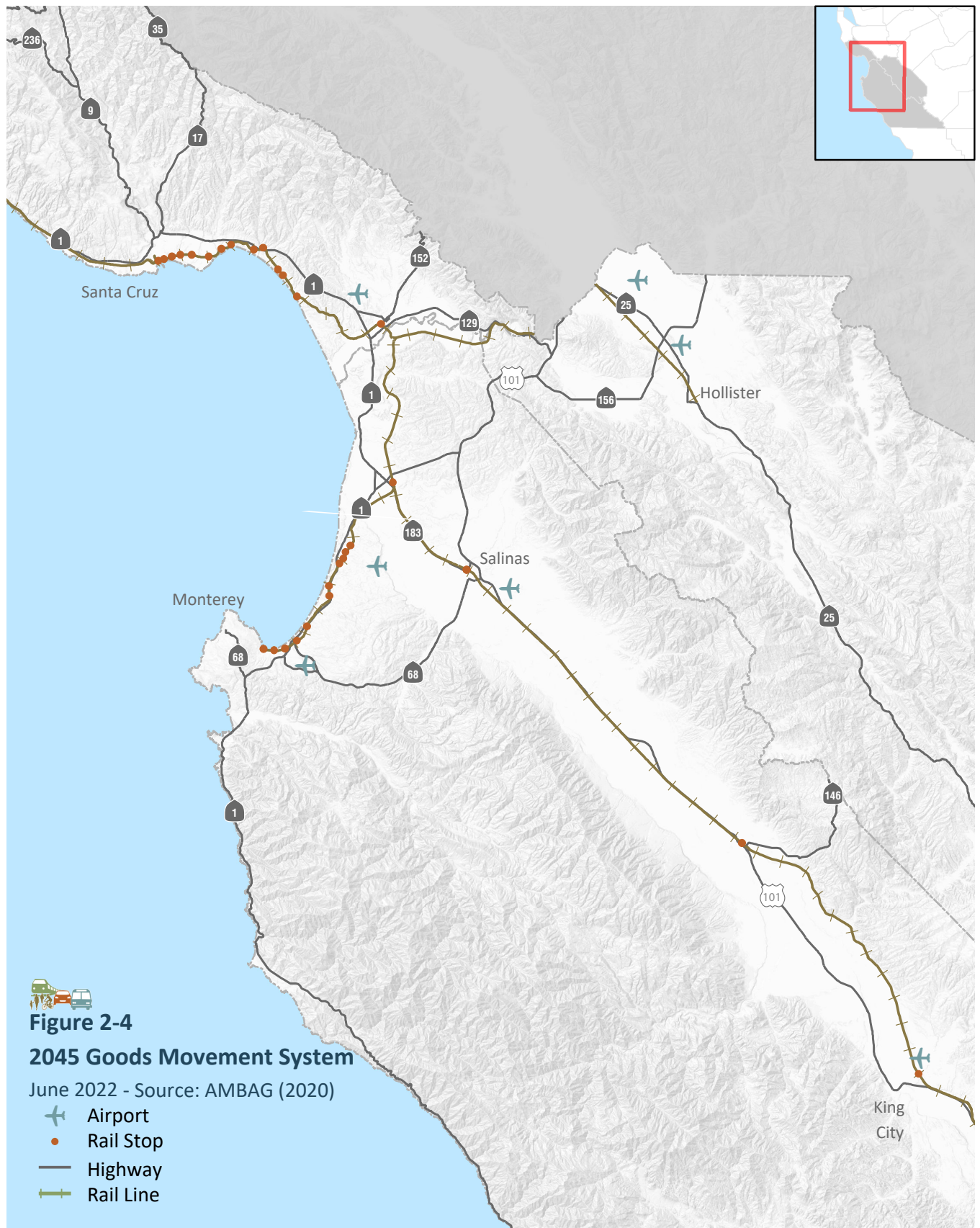
Central Coast Coalition

The purpose of the Central Coast Coalition (Coalition) is to increase the awareness of the U.S. 101 Corridor along the central coast as a major economic asset to the regions, the state and the nation, and to secure investments for its improvement. The Central Coast Coalition is comprised of the Santa Barbara Association of Governments, Council of San Benito County Governments, Transportation Agency of Monterey, San Luis Obispo Council of Governments, Santa Cruz County Regional Transportation Commission, and AMBAG. The Coalition was formed in 2010 and has worked together to develop and distribute information about the Corridor including but not limited to improvement needs, funding options and strategies, as well as economic impacts and benefits. In addition, the Coalition seeks out funding for improvements within the Corridor, coordinates with Caltrans District 5 to develop projects, and seeks support from public and private partners to raise awareness about the importance of the Corridor. Caltrans District 5 is developing a U.S. 101 Business Plan to create a multimodal investment strategy that identifies total funding needs, gaps and potential funding sources. with mutual support of the Coalition.

California Freight Mobility Plan

In accordance with MAP 21, Caltrans developed the California Freight Mobility Plan (CFMP). The original CFMPthe Goods Movement Action Plan, completed in 2014,was updated in two phases in 2005 and 2007. The CFMP is updated every five years, addresses current freight conditions, identifies important trends, and responds to major issues in goods movement across all modes and regions of California. In addition, the CFMP plan responds to a number of contemporary issues in terms of community impacts, trucking, new legislation, regional differences and linkages, and greenhouse gas emissions reduction strategies. The current CFMP was completed in March 2020.

Figure 2-4: Goods Movement System





A Freight Working Group was established by Caltrans District 5 to update the Commercial Flows Study and other freight studies in the Central Coast region.

Commercial Flows Study

Over the next several decades, the Central Coast region can expect to see significant increases in freight movement due to both population increases and a continued expansion of the region's agricultural and industrial production. As a result of this demand for freight by both the local population and industries, a focus on enhancing the efficiency and safety of the region's goods movement system is critical to supporting the economic health of the region and the quality of life for its residents.

To respond to this challenge, six major agencies across the five counties – comprising the California Central Coast region, from Santa Cruz County in the north to Santa Barbara County in the south – partnered with Caltrans District 5 to prepare this study of freight flows, issues, needs, and deficiencies in the region. The recommendations that came out of the 2012 Commercial Flows Study were the result of engaging private and public sector stakeholders in the Freight Actions Strategy Taskforce. The recommendations include operational improvements and capacity increases to the major corridors that move freight traffic.

Salinas Valley Truck-to-Rail Intermodal Facility Feasibility Study

One of the key factors in maintaining the competitiveness of the Salinas Valley agricultural industry is to provide additional methods of shipping products to important markets. The main markets are primarily located in the eastern United States. Given upward pricing pressure on the trucking industry due to rising fuel costs, as well as safety concerns, and problems with truck traffic congestion, freight and transportation stakeholders are looking for alternatives for transporting goods. The rail system is one of the main options available.

The purpose of the Truck-to-Rail Study, prepared by AMBAG in 2011, was to analyze the potential for building and operating a truck-to-rail intermodal facility to support the movement of perishable agricultural products

from this region. This study builds off a previous study commissioned by the Grower-Shipper Association of Central California in Fall 2008 which showed there was both a desire on the part of the growers/shippers in the Salinas Valley to expand methods of shipping from truck only and that rail would be a cost competitive option for shippers.

This study also analyzed the impact of the significant number of trucks leaving the Salinas Valley has on air quality, roadway congestion, safety and quality of life in this region. Using modeling software, this study determined that greenhouse gas emissions could be reduced by as much as 59 percent by switching from truck to rail freight and that other pollutants could be reduced by an average of 35 percent. The study identified two potential locations in Chualar and Gonzales for a truck-to-rail intermodal facility based on operations logistics and cost feasibility. A preliminary environmental assessment of the two sites was also prepared.

U.S. 101 Corridor Freight Study

The primary freight corridor in the Monterey Bay Area is U.S. 101. It is the main north-south route between Los Angeles and San Francisco. The U.S. 101 corridor supports the economic vitality of the Central Coast area as a major goods movement corridor and is a key commute route.

AMBAG was awarded a Caltrans Partnership Planning grant in 2013 to identify short term and long term strategies to improve freight mobility and transportation operations along U.S. 101 from San Benito County through Santa Barbara County. The U.S. 101 Freight Study will assess opportunities for improved freight operations, safety, and efficiency, and will identify funds for recommended improvements. It will build off of the aforementioned studies which identify the commodities, goods movement patterns, and intermodal station feasibility to analyze opportunities for freight. Final recommended improvements provide better connectivity between adjacent communities. The study was completed in 2016.

In April 2022, AMBAG was awarded a Caltrans planning grant to develop the California Central Coast Sustainable Freight Study which will cover the five counties area of Santa Barbara, San Luis Obispo, Monterey, San Benito and Santa Cruz. This study will advance sustainable freight improvements and position projects to be in alignment with state planning priorities. The study is expected to begin in Fall 2022 and be completed by Summer 2025.

Transportation Management Programs

Transportation Demand Management (TDM) and Traffic Systems Management (TSM) are two types of techniques used to improve the efficiency and effectiveness of the transportation system. In TDM, the focus is on changing peoples' travel behavior; in TSM, system operational and/or service improvements are implemented to facilitate traffic flow. When successfully employed, these techniques decrease travel demand and improve operations and/or services prior to committing to significant investment for new supply or new capacity. Planning for TDM and TSM strategies requires looking at the transportation system as an interconnected whole in order to reduce GHG emissions.

Demand Management

TDM strategies reduce vehicular demand and thereby congestion, particularly during peak periods. In total, the 2045 MTP/SCS allocates approximately \$127 million to TDM strategies.

Ridesharing

Ridesharing strategies include vanpool services for larger employers and rideshare matching services. The implementation of ridesharing programs and projects, such as providing vanpool services to commuters, is an effective strategy leading to reduction of the number of vehicle trips which helps to meet the GHG targets.

Vanpools

Over the years, AMBAG has recognized that there is a limited set of transportation options for individuals who would like to use sustainable modes of transportation, or cannot afford the cost of driving a car. Since 2009, the Monterey Bay region has benefited from a regional vanpool program that AMBAG initiated by implementing a partial subsidy funded through AB 2766 grants. The program provides a viable and cost efficient rideshare opportunity to employees and students who live, work, or attend college in Monterey, Santa Cruz, and San Benito Counties. The program also provides a sustainable transportation solution for the region's unique land use, demographic and employment characteristics. Moreover, the program fills an important market niche by helping traditionally underserved population groups (including but not limited to low income and minority population, rural communities, agriculture workers, etc.). The agricultural industry is a major employer in the region, currently comprising roughly 17 percent of all employment and whose workers represent a unique sector particularly well suited for vanpools. Often working irregular hours, at multiple worksites, and/or for multiple employers, the seasonal and remote nature of work destinations makes fixed route transit service impractical because average one-way commute distances exceed 20 miles and farm workers often need to travel to multiple work locations within one work day. The regional vanpool program provides agricultural employees with a safe and affordable form of transportation, thus providing flexibility and increased employment opportunities.

For other occupations, strategically located Park and Ride lots are located throughout the region and serve as pick up sites for vanpool and carshare commuters who travel out of the region for employment in the neighboring counties. The University of California Santa Cruz (UCSC) operates 14 vanpools located from San Jose to Monterey. The vanpool program assembles University employees and students commuting to the main campus and provides a van for transport. On-campus parking fees are used to subsidize the vanpool program for staff and faculty. The Go831 Smart Commute Travel Demand Management Program, operated by the Transportation Agency of Monterey County (TAMC), promotes travel alternatives like carpooling and vanpooling by providing information to the traveling public. Go831 works directly with major employers, schools and businesses serving visitors to provide support, planning assistance and tools for these institutions to establish and maintain their own "smart commute" programs. Programs offered through the Go831 Smart Commute Program include, Park and Ride lots and Commuter Choice Programs, both of which promote the use of vanpool as a means of reducing VMT and GHGs throughout the region. The Commuter Choice Program offers a way to track and connect with other vanpool and carpool riders using the RideAmigos platform, while keeping the employers' administrative costs low.

Telecommuting

TDM investments aim to reduce peak hour congestion by promoting flexible work schedules and telecommuting. Flexible work schedules allow employees to work fewer days in exchange for longer hours on the days they do work. Beyond the changes that can be accounted for in the development of a long-range transportation plan, the 2045 MTP/SCS was developed during the COVID-19 global pandemic. Among many other impacts, COVID-19 forced many people to telecommute and work from home for more than 12 months. Time will tell what the lasting impacts will be, but the 2045 MTP/SCS makes an assumption that remote work will be more significant post pandemic than it was prior to the pandemic. The lasting impacts of the COVID-19 global pandemic will require careful analysis for many years going forward.

Table 2-2: TSM Strategies

Strategy	Benefit
Incident Management	Reduces incident related congestion
Ramp Metering	Alleviates congestion and reduces accidents at on ramps and interchanges
Traffic Signal Synchronization	Minimizes wait times at traffic signals
Traffic Signal Preemption	Improves operational efficiency of transit and allows better service of emergency vehicles
Advanced Traveler Information	Provides real-time traffic conditions, alternative routing and transportation choices such as 511 programs or Waze
Improved Data Collection	Monitor system performance
Transit Automatic Vehicle Location (AVL)	Enables monitoring of transit vehicles and ensures on time performance

Systems Management

TSM increases the productivity of the existing multimodal transportation system, thereby reducing the need for expensive system expansion. These projects include signal coordination and transit sign priority. TSM relies in part on intelligent transportation system (ITS) technologies to increase traffic flow and reduce congestion. This 2045 MTP/SCS dedicates \$109 million to TSM projects and programs.

Regional ITS Architecture

The Central Coast Intelligent Transportation Systems Architecture and Implementation Plan, prepared by Caltrans in 2010, establishes a framework for the regional integration of transportation systems. It not only looks within the MPO boundaries, but strategically addresses integration between MPO's and with Caltrans from the broader Central Coast perspective.

AMBAG continues to maintain, revise, and validate, as needed, the Central Coast Regional ITS Architecture in consultation with all regional agencies including but not limited to the three RTPAs and Caltrans. ITS projects to be implemented over next 25 years are described in the project lists contained in Appendix C.

Transportation System Management Strategies

In the Monterey Bay region, TSM efforts will help improve the efficiency of the existing transportation system and help the region meet its GHG reduction targets. See Table 2-2 for a summary of regional TSM strategies and associated benefits.

Future Transportation Technologies

Transportation plans must be responsive to emerging technologies that make existing modes more efficient, and to new transportation modes that better address the needs of a changing society. Technological innovations have the potential to make existing transportation choices more widely available and easier to use throughout the region. By providing more options for local and regional trips, technological innovations have the potential to shift travel to less environmentally damaging modes, lessen the negative environmental impacts associated with current vehicle use, increase system efficiency, improve safety, and reduce auto-related collisions and fatalities. Although they may have limited applicability in many parts of our region today, there is little doubt that certain technological innovations in transportation will grow significantly during the time frame of the 2045 MTP/SCS and beyond. For this reason, it is important to strategically plan our transit networks in preparation for emerging technologies to come online regionally. Changing demographics and broad economic trends have led to a demand for more flexible transportation options, the expansion of the sharing economy, and calls for

communities where people can live, work, and play within a small area. AMBAG will continue to monitor the emerging technologies as they come online in the U.S.. A few of the near-term emerging technologies are highlighted in the next section.

Smart Cities Digital Infrastructure and Intelligent Transportation Systems

Advancements in Information and Communications Technology (ICT) has allowed for quick access to on demand services which has altered travel demand patterns in significant ways. Perhaps the greatest impact ICT will have on the future of transportation is the Internet of Things (IoT). IoT refers to a network of ordinary objects, like household appliances, vehicles, street lights and traffic signals that are embedded with Internet-connected electronics, sensors, or software that can capture, exchange, and receive data. The rapidly increasing number of connected devices and systems presents significant opportunities for transportation. Data and connectivity enable the implementation of Smart Cities and intelligent transportation systems that offer a host of benefits, such as reliability, operational efficiency, cost effectiveness, safety and improved asset management and planning.

Smart Cities are connected cities that utilize ICT to enhance the quality and performance of public services, by connecting people, vehicles and infrastructure which communicate in 'real-time' through regional telecommunication networks. Smart Cities refer to the way in which public agencies use technology to collect data, provide services, conduct business more efficiently and improve decision making. Smart Cities and Intelligent Transportation Systems (ITS) provide the connected infrastructure that ultimately supports the efficiency of a shared, electric, and autonomous transportation future. The use of Smart City digital infrastructure has a wealth of future applications to enhance mobility across the city and region, including improved parking, improved traffic flow, targeted investments in bicycle infrastructure, improved public safety, improved transit trip planning, optimized traffic flow and congestion and can lead to increases in users, customer satisfaction and accessibility.

AMBAG recognizes the importance advancements in technology, data collection and ICT have in enhancing the performance of public services, such as energy and transportation, and reducing consumption and increasing responsiveness and overall efficiency of transportation operations.

Mobility as a Service

Mobility as a Service (MaaS) is the idea of providing people with on-demand access to a wide range of public and private shared mobility services. MaaS enables a transition from the current paradigm where vehicle ownership is all but required to enable people to freely move about their community, to a new mobility paradigm, where people have access to an array of transportation services. MaaS proponents have developed mobile applications that aggregate data from service providers to enable users to plan and book door-to-door trips using a single application that provides the best transportation option based on real-time conditions and user preferences (i.e., time, convenience, and cost).

While shared mobility, which includes transit, carshare, and vanpool, is not a new concept, technology has allowed for explosive growth and variance in business models in recent years, blurring the line between public and private transportation. Services like carsharing, traditionally seen at airports across the world, are taking off in more innovative ways thanks to the advancement of MaaS in everyday life. Transit agencies and cities of all sizes across the U.S. are exploring MaaS as a way to enhance public transit and reduce drive-alone trips. Establishing a mobility hub is one strategy to implementing MaaS to support transit investments and improve mobility in a variety of community settings.

Mobility hubs are places of connectivity where differing travel options come together, offering on-demand

travel opportunities, and supporting infrastructure that enhance connections to high-quality transit services, while helping people make short trips around a community on flexible fleets. Hubs can span one to a few miles and are uniquely designed and able to be integrated with complete corridors, prioritizing pooled ride options over single-occupant vehicles, while also ensuring safe walking and biking experiences. Mobility hub services and supporting amenities often include: bikeshare, carshare, neighborhood electric vehicles, convenient micromobility parking and e-charging, dynamic parking management strategies, real-time traveler information, on-demand ride sharing, microtransit services, safer bikeways and walkways, and a variety of urban design features.

AMBAG is aware of the potential for mobility hubs in the region and the opportunities for automated and connected vehicle technologies to enhance travel for people of all ages and abilities, while fostering a safer environment for all mobility hub users.”

Flexible Fleets

Flexible fleets are shared, on-demand transportation services that provide convenient and personalized travel options. While they build on the popularity of services such as ride share, bikeshare, and scootershare, fleets can also include neighborhood shuttles and delivery services. Flexible fleets encompass a range of services including:

- Micromobility
- On-Demand Ride Hailing (also known as Transportation Network Companies)
- Ridesharing
- Microtransit
- Last Mile Delivery Service

The result of planning with the intent of implementing all five services will result in better, more convenient access to transit, reduced reliance on personal vehicles, and an overall reduction in congestion and greenhouse gas emissions. Operating flexible fleets within, and between, mobility hubs advances the full potential and utilization of these mobility service options, increasing the above mentioned benefits.

Autonomous Vehicles

New emerging technologies are developing that have the potential to fundamentally alter travel patterns and how goods and services are delivered. Automated vehicles are those in which at least some aspect of a safety-critical control function (e.g., steering, throttle, or braking) occurs without direct driver input. Automated vehicles may be autonomous (i.e., use only vehicle sensors) or may be connected (i.e., use communications systems such as connected vehicle technology, in which cars and roadside infrastructure communicate wirelessly). These emerging technologies have the potential to increase mobility for the elderly, disabled and transit dependent, make the transportation system safer, more efficient and reliable, and to reduce criteria pollutant and greenhouse gas emissions. Google’s autonomous car project, known as Waymo, began in 2009 and now has over twenty million miles of driverless operation in 25 cities across the nation. Other private technology companies have also begun testing driverless cars with success. The 2045 MTP/SCS recognizes these advancements and AMBAG will be monitoring this technology to potentially incorporate autonomous car operations in future horizon years.

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3 Financial Plan



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Introduction

The financial plan identifies how much money is available to support the region's surface transportation investments, including transit, highways, local road improvements, active transportation system preservation, and demand management goals. It also addresses the need for investment in goods movement infrastructure. Improving ground access in and around major freight facilities and enhancing major highways and public transit are critical to maintaining the health of the Monterey Bay Area's economy. The 2045 MTP/SCS calls for various revenue sources for implementing a program of infrastructure improvements to keep people and freight moving.

The 2045 MTP/SCS includes reasonably available revenue sources to supplement existing transportation dollars. The Monterey Bay Area's financially constrained plan includes a core revenue forecast of existing local, state, and federal sources along with funding sources that are reasonably available over the time horizon of the 2045 MTP/SCS. The financial plan also includes action steps to obtain the revenues necessary for implementing the region's transportation vision.

Currently there are considerable challenges associated with financing transportation investments. The Plan highlights the importance of finding new and innovative ways to pay for transportation, including the ever expanding backlog of investment needs just to maintain the existing transportation system.

Revenue & Expenditure Categories

The 2045 MTP/SCS is based on existing and reasonably available revenues. The existing revenues identified are those that have been committed or historically available for the building, operation, and maintenance of the current roadway and transit systems in the Monterey Bay Area. Essentially, these revenues are existing transportation funding sources projected to 2045.

Financial Assumptions

The financial forecasts in the 2045 MTP/SCS are based on reasonably foreseeable revenues. The projections are calculated using a combination of historical averages, current trends, and/or state and federal actions.

Actual revenues will vary from year to year. The financial projections and estimation methods used in the 2045 MTP/SCS were developed collectively with transportation planning agencies in the Monterey Bay Area including AMBAG, the Transportation Agency for Monterey County, the Santa Cruz County Regional Transportation Commission, the San Benito County Council of Governments, the California Department of Transportation (Caltrans), Monterey-Salinas Transit, the Santa Cruz County Metropolitan Transit District, the three Counties, and 18 cities. Projections are consistent with figures shown in the California Transportation Commission's State Transportation Improvement Program Fund Estimate and Federal Transportation Improvement Program.

Year of Expenditure (YOE)

Federal law requires regions to escalate revenue sources and project costs to reflect "year of expenditure dollars" (YOE). The rationale for this rule is to present a more accurate picture of costs, revenues, and deficits associated with the long range plan. Table 3-1 shows projected revenue in today's dollars as well as in escalated (future) dollars. The text below describes each revenue source using today's dollars.

Revenue Sources

State and federal planning regulations require the development of a revenue constrained plan. The Financial Plan is based on current and reasonably available sources and levels of federal, state, and local transportation revenue, projected out to the year 2045. Revenue forecasts are thus a key part of the 2045 MTP/SCS development. A full list and description of funding sources is included in Appendix B.

The major sources of revenue for transportation can be divided into three categories: federal, state and regional/local.

Federal Revenues

Federal transportation bills must be reauthorized by Congress to provide a predictable source of federal funding for projects and all federal funding is subject to the annual budget process and congressional appropriations. On July 6, 2012 President Obama signed into law a new two year transportation authorization, entitled Moving Ahead for Progress in the 21st Century (MAP-21). The first long term highway authorization enacted since 2005, MAP-21 created a streamlined, performance based and multimodal program to address the challenges facing the U.S. transportation system.

MAP-21 was followed by the Fixing America's Surface Transportation Act (FAST Act) in December 2015 for the 2016-2020 period. The FAST Act authorized \$305 Billion nationwide and built on the policy framework of MAP-21 including continuous efforts to streamline project delivery and new dedicated funding for freight projects. In 2020, the FAST Act was reauthorized until September 2021. In September 2021, the Fixing America's Surface Transportation Act (FAST Act) expired. As part of negotiations for a multiyear federal infrastructure plan, Congress adopted a new federal transportation act – the Infrastructure Investment and Jobs Act (IIJA) of 2021 – which is expected to increase funding for transportation. Under IIJA, California is estimated to receive \$25.3 billion for federal-aid highway apportioned programs over five years, \$4.2 billion over five years from a new bridge program; \$384 million over five years from a new program to support the expansion of an electric vehicle (EV) charging network; and \$9.45 billion over five years to improve public transportation options across the state. The IIJA also creates new transportation discretionary grant programs and increases funding for existing discretionary grant programs between FY 2022 and FY 2026. Details on what this means for projects in the AMBAG region will be integrated into future updates once available.

Federal revenue sources for the region total approximately two billion, roughly 15 percent of the region's total forecasted revenue through 2045. The region qualifies for federal revenue from almost 19 different programs. However, just four of these programs constitute 60% of all federal revenue: the Surface Transportation Block Grants/Regional Surface Transportation Program, the Highway Bridge Program, FEMA funding for emergency road repairs, and the FAA Airport Improvement Program. The major revenue sources are detailed below.

Surface Transportation Block Grants/Regional Surface Transportation Program

The Surface Transportation Block Grants (STBG) represents the most flexible federal fund source available for local uses. Funds can be used for projects on any Federal-aid highway (ranging from national highways to city arterials), rural minor collectors, bridge projects, transit capital projects, and bus facilities.

Eligibility for use of STBG funds has been expanded over the years to include environmental provisions, modification of sidewalks to meet Americans with Disabilities Act requirements, and infrastructure based intelligent transportation systems capital improvements. The region forecasts over \$262 million from this federal program over the course of the next 25 years. Key Federal revenue sources are detailed below.

The Gas Tax and the Highway Trust Fund

The federal government funds transportation projects and programs in part through taxes and fees related to use of the transportation system. The Highway Revenue Act of 1956 tied the gas tax to transportation projects through the Federal-Aid Highway program. The 1956 act created a dedicated transportation funding account, the Highway Trust Fund (HTF). In the early 1980s, Congress expanded the definition of federal highways and created new programs to address transit infrastructure as well as established a Mass Transit Account within the trust fund.

Since 1956, Congress has taken gradual steps to increase the gas tax and diversify the taxes and fees associated with funding the transportation system. Congress has traditionally counted on ever increasing gas tax revenues generated from ever increasing traffic volumes to keep up with the need for transportation funding. However, mileage driven per person has hit a plateau in recent years and improvements in fuel efficiency are slowing fuel consumption.

Source: Transportation for America, "Transportation 101: An Introduction to Federal Transportation Policy," <http://t4america.org/docs/Transportation%20101.pdf>

Highway Bridge Program

The Highway Bridge Program (HBP) is a safety program that provides federal-aid to local agencies to replace and rehabilitate structurally deficient locally owned public highway bridges or complete preventive maintenance on bridges that are not deficient. This program is funded by the Federal Highway Administration (FHWA). The programming of HBP projects is managed through a 15-year plan. This multi-year plan provides 4-years of HBP funding to be programmed in the Federal Statewide Transportation Improvement Program (FSTIP) and 11-years of planning. The intent of the HBP is to remove structural deficiencies from existing local highway bridges to keep the traveling public safe. The HBP goal is to keep local highway bridges in good condition through a preventive maintenance program and to fix bridges that are in fair condition. A bridge that is in poor condition must utilize the most cost-effective and prudent solution to improve its condition from poor to fair or good. The region forecasts over \$365 million from this federal program over the course of the next 25 years.

Federal Emergency Management Agency (FEMA) Funding

FEMA reimburses local governments for a variety of disaster related costs. In the AMBAG region, recent and expected funding is primarily for fire disaster response. Recently fires in the region have increased in frequency and intensity. The Soberanes Fire burned over 132,000 acres in 2016 and was the most expensive fire in history to fight at the time. In August 2020 two more major fires affected the region. The CZU Fire in Santa Cruz County burned more than 86,000 acres destroying over 7,500 structures and the Dolan Fire in Monterey County burned approximately 125,000 acres. Fires can damage the transportation system in many ways. For large fires, hundreds of heavy fire trucks come to the region and cause a significant wear and tear impact on highways, roadways, and rural roads between the central incident command post and the fire lines. Wood, plastic, and metal roadway structures are often damaged by intense heat including culverts, side rails, and bridge structures. Fallen branches and trees can block culverts and drainage system. Post-fire season rains then often cause wash outs, undermining, and in some cases total loss of roadway sections. FEMA Fire Management Assistance Grants (FMAG) helps local governments pay for some of the costs of rebuilding and repairing bridge and road facilities.

Fire Management Assistance is available to states, local and tribal governments, for the mitigation, management, and control of fires on publicly or privately owned forests or grasslands, which threaten such destruction that constitute a major disaster. The Fire Management Assistance declaration process is initiated when a State submits a request for assistance to the Federal Emergency Management Agency (FEMA) Regional

Director at the time a “threat of major disaster” exists. This normally occurs after the Governor declares a State of Emergency related to the specific fire incident. The FMAG Program provides a 75 percent Federal cost share and the State is expected to pay the remaining 25 percent of costs. The region forecasts over \$297 million from this federal program over the course of the next 25 years.

Federal Aviation Administration’s Airport Improvement Program

The Airport Improvement Program (AIP) provides grants to public agencies — and, in some cases, to private owners and entities — for the planning and development of public-use airports included in the National Plan of Integrated Airport Systems (NPIAS). For small primary, reliever, and general aviation airports, the grant covers a range of 90-95 percent of eligible costs. Eligible projects include those improvements related to enhancing airport safety, capacity, security, and environmental concerns. Applicants can get funding for most airfield capital improvements or rehabilitation projects and in some specific situations, for terminals, hangars, and nonaviation development. Certain professional services that are necessary for eligible projects (such as planning, surveying, and design) may also be eligible. Projects related to airport operations are not eligible for funding.

As the demand for AIP funds exceeds the availability, FAA bases distribution of these funds on present national priorities and objectives. AIP funds are typically first apportioned into major entitlement categories such as primary, cargo, and general aviation. Remaining funds are distributed to a discretionary fund. Set-aside projects (airport noise and the Military Airport Program) receive first attention from this discretionary distribution. The remaining funds are distributed according to a national prioritization formula. The region forecasts over \$272 million from this federal program over the course of the next 25 years.

Urbanized Area Formula Program

The Urbanized Area Formula (or known as Section 5307) is the original federal transit assistance program for transit operators in urbanized areas with a population of 50,000 or more. Federal Transit Administration (FTA) Section 5307 block grants are apportioned annually to urbanized areas through a complex formula weighted by population density and revenue vehicle miles, or rail miles, if applicable.

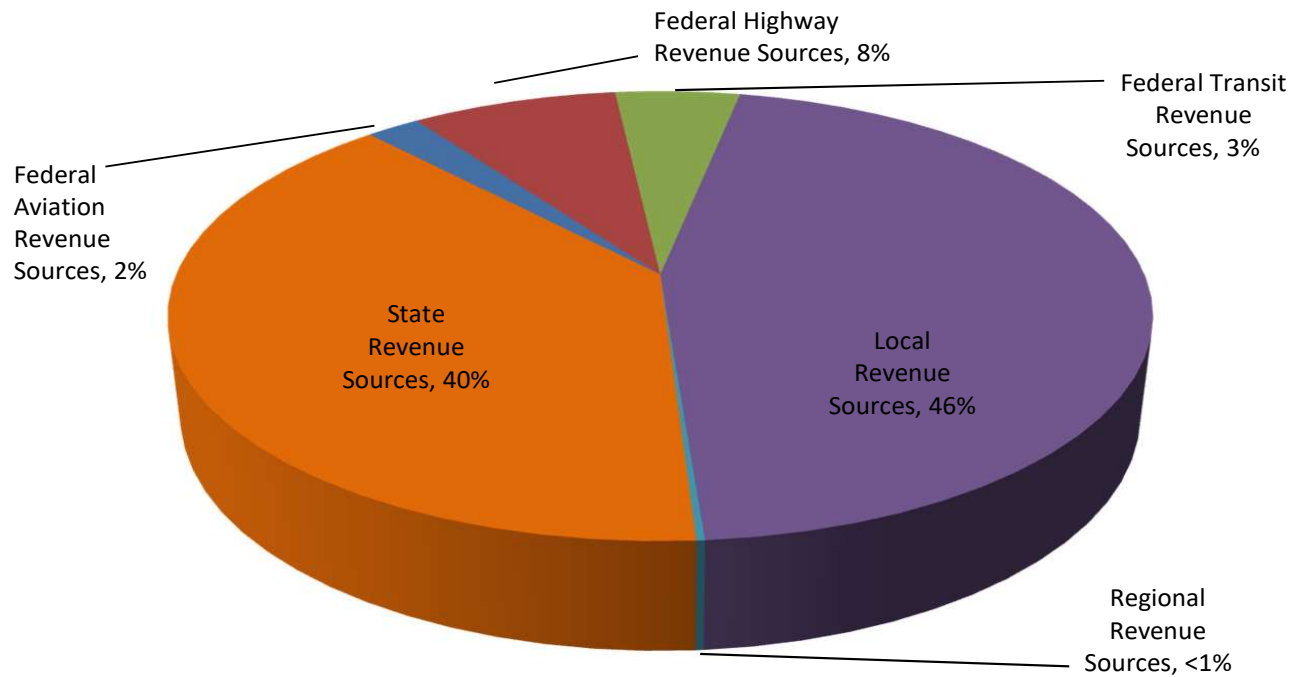
For urbanized areas with populations less than 200,000, funding may be used for either capital or operating costs at local option and without limitation. Local match requirements vary depending on the use of 5307 funds.

Operations require a 50 percent federal, 50 percent local match; and capital acquisitions and associated capital maintenance items are allowed at a 80 percent federal, 20 percent local match rate. If they choose, operators can use Section 5307 funds for planning purposes. The region forecasts more than \$284 million from this federal program through 2045.

State Revenues

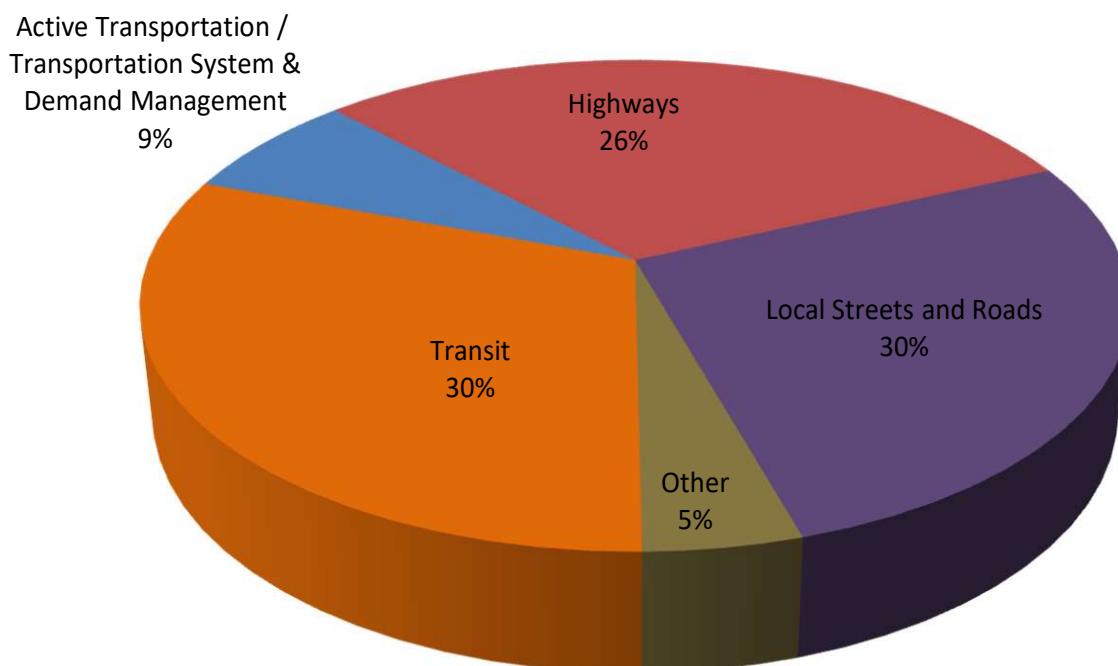
State revenue sources total over \$5.4 billion, or over 40 percent of the region’s total forecast revenue for the life of the Plan and represents a significant increase in the State’s revenue impact on the MTP/SCS. This is due to the passage of the Road Repair and Accountability Act in 2017, better known as SB 1, and subsequent funding. SB 1 greatly increased transportation revenues throughout the state through increases in gasoline sales and excise taxes and vehicle registration fees. Most of the new state funds from SB 1 are allocated through existing programs including two programs – State Highway Operation and Protection Program (SHOPP) and the State Transportation Improvement Program (STIP). The SHOPP and STIP account for over 80 percent of total state funding. The 2045 MTP/SCS is consistent with the STIP, ITIP & RTIP. The major state revenue sources are detailed below.

Figure 3-1: Total Revenue by Source



Source: AMBAG, SBtCOG, SCCRTC and TAMC

Figure 3-2: Total Expenditures by Project Type



Source: AMBAG, SBtCOG, SCCRTC and TAMC

Table 3-1: Total Revenue by Source

Revenue Sources (all figures in \$1000's)	Total in Today's Dollars	Percent of Total Funding (Today's Dollars)	Total in Future Dollars	Percent of Total Funding (Future Dollars)
Local Revenue Sources	\$6,283,432	46.4%	\$7,691,235	46.2%
Gas Tax	\$794,525	5.9%	\$997,720	6.0%
Local Misc. Revenues	\$1,827,902	13.5%	\$2,276,502	13.7%
Transit Revenues	\$708,337	5.2%	\$875,935	5.3%
Transit Sales Tax	\$835,093	6.2%	\$1,040,995	6.2%
Transportation Sales Tax	\$1,507,063	11.1%	\$1,889,571	11.3%
Local SB 1 Revenues	\$610,512	4.5%	\$610,512	3.7%
Regional Revenue Sources	\$30,375	0.2%	\$38,125	0.2%
AB 2766	\$30,375	0.2%	\$38,125	0.2%
State Revenue Sources	\$5,461,218	40.4%	\$6,729,792	40.3%
SB 1 State Revenues	\$413,475	3.1%	\$472,054	2.8%
SB 1 SHOPP Addition	\$812,625	6.0%	\$1,020,431	6.1%
SHOPP	\$2,238,250	16.5%	\$2,812,384	16.9%
STA	\$279,603	2.1%	\$345,547	2.1%
State Misc. Revenues	\$250,988	1.9%	\$273,331	1.6%
STIP	\$304,786	2.3%	\$357,788	2.1%
Federal Transit Capital Programs	\$231,740	1.7%	\$282,165	1.7%
Metropolitan/State Planning	\$5,013	0.0%	\$6,314	0.0%
ATP	\$249,388	1.8%	\$312,744	1.9%
LTF/TDA	\$675,350	5.0%	\$847,034	5.1%
Federal Transit Revenue Sources	\$416,225	3.1%	\$519,320	3.1%
Nonurbanized Rural Area Formula Program	\$50,150	0.4%	\$63,236	0.4%
Small Transit Intensive Cities Program	\$71,150	0.5%	\$88,764	0.5%
Urbanized Area Formula Program	\$284,925	2.1%	\$357,320	2.1%
Federal Rail Revenue Sources	\$10,000	0.1%	\$10,000	0.1%
Federal Highway Revenue Sources	\$1,075,734	7.9%	\$1,335,565	8.0%
Federal Highway Misc. Revenues	\$717,469	5.3%	\$885,917	5.3%
Highway Safety Improvement Program	\$96,237	0.7%	\$120,770	0.7%
Surface Transportation Block Grant	\$262,028	1.9%	\$328,878	2.0%
Federal Aviation Revenue Sources	\$272,750	2.0%	\$343,307	2.1%
FAA Airport Improvement Program	\$272,750	2.0%	\$343,307	2.1%
Grand Total	\$13,539,734	100.0%	\$16,657,344	100.0%

Source: AMBAG, SBtCOG, SCCRTC and TAMC

State Highway Operation and Protection Program

The State Highway Operation and Protection Program includes state highway rehabilitation, traffic safety, seismic safety, and traffic operational improvements. The SHOPP, a four year program, is adopted separately from the State Transportation Improvement Program. The Rehabilitation and Safety and Other Highway Construction elements previously included under the STIP are incorporated under the SHOPP.

New projects for the SHOPP are given priority and programmed according to rehabilitation, safety and operational needs. No new project is programmed unless Caltrans has a completed project study report (PSR) or equivalent document identifying a specific project scope and estimated cost. Funding from this source is forecasted to total over \$3 billion for the life of the 2045 MTP/SCS.

State Transportation Improvement Program

The State Transportation Improvement Program (STIP) was significantly changed with the enactment of Senate Bill (SB) 45 in 1997. SB 45 simplifies the transportation programming process by combining seven previous funding categories into one pot of funds which is then divided into two categories. Prior to its division, however, Caltrans support, planning, and maintenance and rehabilitation needs are taken from the total. The remaining funding is then divided into the two categories: Regional Transportation Improvement Program and Interregional Transportation Improvement Program.

Prior to 2010, state sales tax on gasoline funded discretionary projects through the Transportation Investment Fund, which distributed revenues to the STIP, local streets and roads, and transit. In 2010, the sales tax revenues were “swapped” for an increased excise tax (initially 17.3 cents) recalculated each year to ensure revenue neutrality. This policy shift significantly reduced STIP funding to the Monterey Bay Area, and while SB 1 addresses the STIP by tying the excise tax to CPI, the STIP funding still lags behind the needs of the program.

The Monterey Bay Area forecasts over \$304 million in revenue from the STIP in total. The 2045 MTP/SCS projects are consistent with the STIP fund estimate, Interregional Transportation Improvement Program, and Federal Transportation Improvement Program.

Active Transportation Program

MAP-21 has consolidated many of the dedicated funding streams for active transportation projects (Transportation Enhancements, Safe Routes to School, and Recreational Trails) under a single new program: the Transportation Alternatives Program (TAP). This equated to roughly a 30 percent cut to active transportation program funding. On the other hand, MAP-21 increased the Highway Safety Improvement Program (HSIP) and has clarified that the safety of all road users should be improved, not just motorists. In addition, MAP-21 gave great flexibility for Caltrans to shift, or flex, money between its many programs—representing a potential opportunity to actually increase the amount of federal funding that supports pedestrian and bicycle projects and programs across the state.

On September 26, 2013, Governor Brown signed legislation creating the Active Transportation Program (ATP) in the Department of Transportation (Senate Bill 99, Chapter 359 and Assembly Bill 101, Chapter 354). The ATP consolidates existing federal and state transportation programs, including the Transportation Alternatives Program (TAP), Bicycle Transportation Account (BTA), and State Safe Routes to School (SR2S), into a single program for active transportation. The funding in this program is administered on a competitive grant basis. The region forecasts over \$249 million in revenue from the competitive ATP grant funding program.

Transportation Development Act - State Transit Assistance Fund

The Transportation Development Act (TDA) of 1971, enacted by the California Legislature to improve existing

public transportation services and encourage regional transportation coordination, provides funding to be allocated to transit and non-transit related purposes that comply with regional transportation plans. The TDA provides two funding sources: the Local Transportation Fund (LTF) and the State Transit Assistance Fund (STA). The LTF portion of TDA funding is described further below under “Local Revenues.” The STA is derived from the statewide sales tax on gasoline and diesel fuel that was recently increased under SB 1. Statute requires that 50 percent of STA funds are allocated according to population and 50 percent be allocated according to operator revenues from the prior fiscal year. The region forecasts over \$228 million in TDA/STA funds.

Transportation Development Act - Local Transportation Fund

The TDA extended sales tax to gasoline purchases and earmarked one-quarter of one cent of all sales tax proceeds for public transit improvements in the county where the revenue was generated. Jurisdictions may use these Local Transportation Fund (LTF) amounts for street and road purposes if a finding is made by the jurisdiction involved that there are “no unmet transit needs that are reasonable to meet.” The reasonableness criteria is defined by each Regional Transportation Planning Agency administering the funds. The Monterey Bay Area forecasts over \$675 million from the TDA/LTF category.

Local Revenues

At over \$6.2 billion, local revenues constitute roughly 46 percent of all transportation funding for the Monterey Bay Area in the 2045 MTP/SCS. Gas tax/gas tax replacement, local transportation sales taxes, and transit sales taxes constitute approximately 50% of all local revenues. These and other major revenue sources are detailed below.

Gas Tax/Gas Tax Replacement

The gas tax funds that are apportioned from the state to cities and counties are to be used exclusively for local roadway projects. Gas tax revenues are dependent upon the amount of gasoline consumed since the tax is assessed on a per gallon basis rather than on the cost of gasoline. Any unobligated balance in these funds is transferred to the State Highway Account.

In the past decade, gas tax revenues have not kept up with demand and in turn have put pressure on other funding sources to make up the deficiency. With the passage of SB 1, local gas tax revenue has been reestablished as a major cornerstone of local transportation funding. At the same time, gas taxes are being assessed at the state level, and a use based replacement is being evaluated.

The region is forecast to receive over \$794 million in gas tax or equivalent revenues over the life of the Plan.

Transit Fares

All the public transit operators in the Monterey Bay metropolitan region charge a user fee (fare) for persons to ride their service. Although the intent is for the users of the service to contribute a small portion of the cost to operate the system, it also is to ensure that each operator can meet pre-established farebox recovery ratio standards for the continued receipt of Transportation Development Act funds. The farebox recovery ratio is the amount collected from passenger fares divided by the cost of providing the service. In the Monterey Bay metropolitan region, this amount ranges from 10 percent (usually the general public transit and paratransit programs have low farebox recovery ratios) to up to 40 – 50 percent (e.g. Express Bus services).

Transit fares will constitute over \$708 million of revenue for the Monterey Bay Region through 2045. Other sources of transit revenue include more than \$1 billion from local transit sales tax and revenue from ad space. The combined total revenue from transit is forecasted to be over \$1.5 billion or over 24 percent of all local revenue sources for the life of this Plan.

Miscellaneous Revenue and Developer Fees

An additional source of funding which is used in many places throughout the Monterey Bay region is traffic impact fees. A traffic mitigation impact fee distributes the costs of transportation improvements among all new developments based on the size of a proposed development or estimates of a project's trip generation capacity. Caltrans notes that fair-share, per unit fees for new development that have a direct nexus to mitigating the impacts of additional trips created, are appropriate. San Benito County has implemented an impact fee program within the County and the City of Hollister for some years. In Monterey County, the Cities of Greenfield, King City, Salinas and Soledad have impact fee programs.

In addition to jurisdictions' traffic impact fee programs, the Transportation Agency for Monterey County has developed a countywide regional traffic impact fee program to move transportation projects forward. Other revenue categories in miscellaneous revenues include airport revenues, city/county general funds, and leases. In total the region forecasts to collect over \$1.8 billion in miscellaneous revenues and developer fees including regional developer fees.

Local Transportation Sales Tax

In November 2016, the Transportation Agency of Monterey County and the Santa Cruz County Regional Transportation Commission passed local sales tax measures, Measure X and Measure D respectively, to fund transportation projects of all modes in their respected counties. In 2018, the Council of San Benito County Governments passed local transportation sales tax Measure G. This significant local investment in transportation will account for a much needed stable funding source for local road maintenance, transit operations, active transportation investments and other congestion reducing projects. In addition, with the passage of these local funding sources, Monterey County, Santa Cruz County, and San Benito County are now considered "self-help" counties making them eligible for additional state grant funding.

Measure X in Monterey County, a three-eighths cent sales tax, will be prioritized to address maintenance of local roads, increase road safety and reduce traffic congestion, improve mobility and make active transportation safer. Based on these priorities the sales tax revenue is divided into two accounts with 60 percent allocated to local road maintenance and safety and 40 percent allocated to regional safety, mobility and walkability. Measure X is expected to generate roughly \$500 million over the life of this plan.

Measure D in Santa Cruz County, a one-half cent sales tax, is designed to address major transportation issues including local road repair and increased safety, traffic congestion, mobility for seniors and those with disabilities, investments in active transportation and increase alternative transportation options. The sales tax revenue generated will be divided into five programs including 30 percent to neighborhood projects for local road repair with set asides for Highway 9 improvements and Highway 17 wildlife crossing projects, 25 percent to highway corridors including transportation demand management programs and safety programs, 20 percent to transit focusing on senior mobility, 17 percent to active transportation projects and the remaining 8 percent to preserve and analyze the rail corridor. Measure D is expected to generate nearly \$625 million over the life of the plan.

Measure G in San Benito County, a 1% sales tax, funds various transportation issues including local road repair, increased safety, traffic congestion, mobility for seniors and those with disabilities, investments in active transportation and improves alternative transportation modes. This local sales tax measure will generate \$380 million between 2020 and 2045.

In total, these local sales tax measures for transportation projects will generate over \$1.5 billion in dedicated revenue, which equates to over 11 percent of all revenue expected in the 2045 MTP/SCS.

Table 3-2: Total Expenditures by Project Type

Expenditures (all figures in 1,000's)	Total in Today's Dollars	Percent of Total Expenditures (Today's Dollars)	Total in Future Dollars	Percent of Total Expenditures (Future Dollars)
Active Transportation / Transportation System & Demand Management	\$1,235,005	7.1%	\$1,519,371	7.1%
Active Transportation	\$998,515	6.4%	\$1,228,429	6.4%
Transportation Demand Management	\$127,238	0.4%	\$156,535	0.4%
Transportation System Management	\$109,252	0.3%	\$134,407	0.3%
Highways	\$3,554,629	30.6%	\$4,373,106	30.6%
Highway - New Capacity	\$1,595,185	14.9%	\$1,962,487	14.9%
Highway - Operations & Maintenance	\$1,959,444	15.7%	\$2,410,619	15.7%
Local Streets and Roads	\$4,080,504	27.1%	\$5,020,066	27.1%
Local Streets & Roads - New Capacity	\$602,115	3.9%	\$740,756	3.9%
Local Streets & Roads - Operations & Maintenance	\$3,478,389	23.2%	\$4,279,310	23.2%
Other	\$645,626	4.4%	\$794,286	4.4%
Airports, Planning, Other	\$645,626	4.4%	\$794,286	4.4%
Transit	\$4,023,970	30.8%	\$4,950,515	30.8%
Paratransit Operations and Capital	\$514,069	4.1%	\$632,437	4.1%
Transit - New Capacity	\$614,124	4.3%	\$755,530	4.3%
Transit - Operations	\$2,406,729	16.6%	\$2,960,894	16.6%
Transit - Fleet Rehab and Capital	\$489,048	5.8%	\$601,654	5.8%
Grand Total	\$13,539,734	100.0%	\$16,657,344	100.0%

Source: AMBAG, SBtCOG, SCCRTC and TAMC

Highway 156 Toll Revenues

Tolling revenues for State Route 156 West are included as a reasonably available revenue source for Monterey County as Local Miscellaneous Revenues. TAMC has been working closely with Caltrans to outline the tasks, activities and agreements necessary to consider tolling via a public-private partnership as an option to fund construction of the State Route 156 West Corridor project. The agency completed a Tolling Traffic and Revenue Study for State Route 156 in 2013 and took action to further study the feasibility of the project. TAMC and Caltrans also held a private industry workshop to gauge private interest in investing in the tolling project. In December 2017, TAMC in cooperation with Caltrans, completed a Level 2 Tolling Study for the 156 Corridor. In June 2020, the State Route 156 Multimodal Corridor Plan was developed with the intent of presenting an integrated analysis of mode-specific plans along the corridor. The region is forecasting over \$146 million in revenue from tolling on State Route 156.

COVID-19 Pandemic Impacts on Transportation Revenues

The COVID-19 pandemic impacted transportation funding primarily in FY 2019/20. Self help tax measures for each County experienced minor decreases in FY 2019/20 revenues due to reduced sales tax revenues which fund these measures. State Transportation Development Act (TDA) funding, a critical local funding source, was also impacted by the pandemic. In addition, transit systems saw revenue losses related to running fewer buses with fewer passengers.

State transportation funding losses were balanced by FY 20/21 federal stimulus funding. Local FY 19/20 transit

funding shortfalls were largely recovered through the Federal Coronavirus Air, Relief, and Economic Security (CARES) Act (HR 748) approved in March 27, 2020. In FY 20/21 California had a projected FY 21/22 budget deficit of \$54 billion, but by May 2021, California had a nearly \$76 billion budget surplus in addition to over \$25 billion in federal stimulus funding. State budgetary losses were mediated by FY 21/22 state budget surpluses exceeding pre-pandemic budget amounts due to stimulus funding, resulting in temporarily increased funding for transportation projects such as transit, rail, active transportation, highways, and local streets and roads.

While short term impacts were realized for transportation funding in the FY 19/20 period, stimulus funding mediated impacts in FY 20/21 and FY 21/22 which generally balanced funding losses with gains. As a result of these revenue recovery initiatives, over the 25-year period, the MTP/SCS does not assume a significant long term negative impact on transportation funding due to the COVID-19 pandemic.

Revenue Constrained Scenario

As the 2045 MTP/SCS is a long range planning document, projects listed in the Plan do not represent any specific commitment of funds to any project. Projects are approved by the Regional Transportation Planning Agency for respective federal or state funding sources and then amended into the Metropolitan Transportation Improvement Program (MTIP) prior to funding being dedicated to an individual project. As such, the MTP represents a long range list of projects through which those programmed funding will be advanced into the MTIP for implementation.

Financing for the 2045 MTP/SCS is shown in the Tables 3-1 and 3-2. The tables identify revenue sources and financial amounts reasonably expected to be available over the life of the Plan as well as expenditures.

Unconstrained Projects

Based on the analysis of travel demand in the region to 2045, needs have been identified for transportation improvements and associated operations, maintenance, and rehabilitation. These needs require funding above and beyond assumed revenues included in the 2045 MTP/SCS. The total known unconstrained need for the Monterey Bay Area is more than \$25 billion. These projects and programs are not included in the 2045 MTP/SCS because funding has not been identified. As funding is identified then these projects may be moved from unconstrained to the constrained list. The Unconstrained projects are included in Appendix C.

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4 Sustainable Communities Strategy



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Introduction

The word “sustainable” is used in many contexts. In the case of this Plan, it refers to the mandates arising from Senate Bill (SB) 375 to develop a Sustainable Communities Strategy. At the heart of SB 375 is the requirement to coordinate transportation investments with land use patterns such that the region makes informed decisions about where to invest the region’s limited resources and simultaneously reduces greenhouse gases by providing more direct access to destinations as well as by providing alternative transportation options. This Plan is required to analyze where people are going and how they want to get there in order to build a transportation network that addresses the mobility and accessibility needs of the region. One strategy included in this Plan to achieve this goal is more focused growth in high quality transit corridors. Another strategy in the Plan is to provide more travel choices as well as a safe and efficient transportation system with improved access to jobs and education for the region’s residents. In addition, the 2045 MTP/SCS supports job creation through economic development, ensures the region’s economic competitiveness through strategic investments in freight, and improves environmental outcomes for the region’s residents by 2045.

The passage of SB 375 directs AMBAG to consider future land use patterns in conducting its long range transportation planning. The mandates of SB 375 provide the region with a renewed opportunity for integrated planning for the future. The purpose of SB 375 is to implement the state’s greenhouse gas (GHG) emissions reduction goals for cars and light trucks. This law requires the California Air Resources Board (CARB) to determine per capita GHG emission reduction targets for each metropolitan planning organization (MPO) in the state at two points in the future—2020 and 2035.

In accordance with Government Code Section 65080(b)(2)(B)(vii), the 2045 MTP/SCS achieves GHG emission reductions of three percent per capita in 2020 and a six percent per capita in 2035, surpassing CARB’s reduction targets of three and six percent for the same years.

Under SB 375, AMBAG and California’s 17 other MPOs must address GHG reduction as part of a broader “Sustainable Communities Strategy,” or SCS. Transportation strategies contained in this MTP, such as managing transportation demand and making certain transportation system improvements, are major components of the SCS. However, the SCS also focuses on the land use growth pattern for the region, because the geographical relationships between land uses—including density, diversity, and intensity—help determine the need for travel. Therefore, AMBAG’s SCS includes not only projections regarding the transportation network, but land use as well.

Specifically, SB 375 calls for the preparation of an SCS that “sets forth a forecasted development pattern for the region, which, when integrated with the transportation network, and other transportation measures and policies, will reduce the greenhouse gas emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the greenhouse gas emission reduction targets approved by the state Air Resources Board.” [CGC Section 65080(b)(2)(B)(vii)].

In summary, under SB 375, an SCS must:

- Identify existing and future land use patterns;
- Identify transportation needs and the planned transportation network;
- Consider statutory housing goals and objectives;
- Identify areas to accommodate long term housing needs;
- Identify areas to accommodate 8 year housing needs;

- Consider resource areas and farmland; and
- Comply with federal law for developing an MTP.

These requirements, as outlined in California Government Code Section 65080(b)(2)(B), do not mean that the SCS creates a mandate for land use policies at the local level. In fact, SB 375 specifically states that the SCS cannot dictate local general plan policies (see Government Code Section 65080(b)(2)(J)). Rather, the SCS is intended to provide a regional policy foundation that local governments may build upon as they choose, which includes quantitative growth projections for each city and county in the region. In addition, some projects consistent with the SCS may be eligible for a streamlined environmental review process.

The key difference between past and current regional planning efforts is a sharper focus on reducing GHG emissions from cars and light trucks. For these vehicles, the state has developed a three-tiered approach to reducing GHG emissions. In addition to the regional land use policies and transportation investments contained in the 2045 MTP/SCS, the state has enacted laws to increase vehicle fuel efficiency and to increase the use of alternative, lower carbon transportation fuels. AMBAG and other regional stakeholders are supporting infrastructure planning for alternative fuels and zero emissions vehicles, which is addressed later in this chapter.

The 2045 MTP/SCS must comply with specific state and federal mandates. These include an SCS, per California Senate Bill 375 (Steinberg, 2008) (SB 375), that achieves GHG emissions–reduction targets set by the California Air Resources Board; compliance with federal civil rights requirements (Title VI); environmental justice considerations; air quality conformity; and public participation.

Key State goals, policies, and Executive Orders considered in the 2045 MTP/SCS:

- SB 375 and SCS Program and Evaluation Guidelines
- 2017 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations
- California Transportation Plan 2050
- California Senate Bill 32 (Pavley, 2016): Reduce GHG emissions 40% below 1990 levels by 2030
- EO B-55-18: Carbon Neutrality by 2045
- EO S-3-05: Reduce GHG emissions 80% below 1990 levels by 2050
- EO N-19-19: empowers the California State Transportation Agency (CalSTA) to leverage discretionary state transportation funds to help meet the state’s climate goals.
- EO N-79-20: 100% zero-emission vehicle sales by 2035

AMBAG strives to advance equity through careful consideration of investments and policies that affect historically marginalized and systemically underserved groups, including people with low incomes and communities of color. The SCS has been crafted to advance equity, with particular attention paid to the needs of people living in disadvantaged communities, which are geographic areas that have a concentration of residents of color or with low incomes, or that have a concentration of residents with low incomes and other factors such as limited English proficiency, seniors or people with disabilities.

California Transportation Plan

Senate Bill 391 of 2009 required the California Department of Transportation to prepare the California Transportation Plan, a long range transportation plan every five years. This system must reduce GHG emissions to 1990 levels from current levels by 2020, and 80 percent below the 1990 levels by 2050 as described by AB 32 and Executive Order S-03-05 respectively. In March 2021, the California Transportation Plan 2050 was completed and demonstrates how major metropolitan areas, rural areas and state agencies can coordinate planning efforts to achieve critical statewide goals. SB 375 addresses the regional GHG emissions from the transportation sector and SB 391 addresses the statewide GHG emissions from the transportation sector, both in support of AB 32.

Climate Action Plan for Transportation Infrastructure

The California State Transportation Agency (CalSTA) has developed the Climate Action Plan for Transportation Infrastructure (CAPTI), in collaboration with many different state agencies. CAPTI is the result of executive orders (EO) signed by Governor Gavin Newsom in 2019 and 2020 targeted at reducing greenhouse gas (GHG) emissions in transportation, which account for more than 40 percent of all polluting emissions, to reach the state's ambitious climate goals. CAPTI includes recommendations on how to invest billions in state discretionary transportation dollars annually to address climate change while supporting public health, safety and equity. This includes revenues collected under Senate Bill 1, the Road Repair and Accountability Act of 2017, State Highway Operation and Protection Program (SHOPP), Active Transportation Program (ATP), and Cap-and-Trade funds.

Regional Transportation Planning Agencies

As the agencies statutorily responsible for the implementation of transportation projects in their respective counties, AMBAG's three RTPAs - the Transportation Agency for Monterey County, the Santa Cruz County Regional Transportation Commission and the San Benito County Council of Governments - have a critical role in the development of the 2040 MTP/SCS. Early in the development process, the RTPAs worked closely with AMBAG to identify key priorities for consideration in the 2045 MTP/SCS's scenario planning process. The RTPAs remained actively involved throughout the entire scenario planning process, offering meaningful input as AMBAG decision-makers considered the various policy alternatives. Given the new requirements of SB 375, it will be critical for the RTPAs to embrace the concept of integrating transportation planning with land use planning for this region to develop a truly sustainable 2045 MTP/SCS.

Creating the 2045 MTP/SCS

The 2045 MTP/SCS contains ambitious goals to meet the region's challenges and is informed by the policies identified in Chapter 1. In recent years, AMBAG and its local jurisdictions laid the groundwork for the 2045 MTP/SCS by engaging in a variety of efforts to plan for more sustainable communities such as the Blueprint – "Envisioning the Monterey Bay." Building on this foundation, AMBAG's first step in developing the SCS was to coordinate with its local and regional partners in both information gathering and strategy development to create a realistic and implementable 2045 MTP/SCS. AMBAG also engaged the public and regional stakeholders to determine their priorities for the region. This "bottom-up" approach has included local jurisdictions, the three regional transportation planning agencies (RTPAs), transit operators, Caltrans, Monterey Bay Air Resources District and a wide array of stakeholders.

Land Use & Transportation Connection

Scenario Planning

Scenario planning analyzes a series of potential futures. In developing the region's first, Sustainable Communities Strategy, it was used to evaluate potential combinations of land use patterns and transportation investment. The resulting scenarios were analyzed and evaluated in context of the 2040 MTP/SCS' goals and performance measures; and were used to develop the scenarios for this 2045 MTP/SCS.

Building off of the scenarios developed for the last MTP/SCS and further refining them, this 2045 MTP/SCS analyzed scenarios. AMBAG used relevant data and information gathered from local governments and the RTPAs- the Transportation Agency for Monterey County, the Santa Cruz County Regional Transportation Commission and the San Benito County Council of Governments- to develop scenarios using a process that engaged the entire region in envisioning a more sustainable future. For the SCS, it is assumed that the AMBAG Regional Growth Forecast (three county total) is a constraint (fixed upper limit) to the amount of total development in the region and the majority of growth is restricted to the Spheres of Influence of any given city. AMBAG worked very closely with local jurisdictions to identify future land uses and growth as depicted in the Place Type and Opportunity Area maps included in Appendix I. Detailed documentation of the development of the scenarios can be found in Appendices E and F.

Regional Growth Forecast

The 2045 MTP/SCS depends on an accurate and credible forecast for future growth in population, housing, and employment as a basis for determining the region's infrastructure needs. Beginning in summer 2019, AMBAG conducted nearly 80 meetings with 18 cities, three counties, Local Agency Formation Commissions and local universities to receive local input on the regional population, housing and employment growth forecast for the 2045 MTP/SCS.

The Regional Growth Forecast uses data from the 2010 Census, data from the California Employment Development Department and InfoUSA, as well as updated 2015 population and household data from the California Department of Finance. Meetings with local jurisdictions led to refinement of the forecast figures, as well as to obtain a consensus on the Regional Growth Forecast to serve as the foundation for the 2045 MTP/SCS. Detailed information on the Regional Growth Forecast can be found in Appendix A.

Overall Land Use Pattern

Land use patterns that provide a diverse mixture of goods and services in combination with residential uses have been shown to reduce vehicle miles traveled and thereby reduce greenhouse gas emissions. Combining mixed use development with infill development, rather than building on the fringes of urbanized areas, reduces greenhouse gas emissions by reducing the distance that people have to travel to meet their basic needs.

However, such smart growth strategies are not enough to encourage people to switch modes of travel from single occupant vehicles to transit, bicycling or walking. Transportation infrastructure that makes alternative modes more attractive also needs to be in place. For this reason, the land use pattern in the SCS, as shown in Figures 4-1 through 4-13, assumes increased density via infill development and mixed use in existing commercial corridors in combination with high quality transit service, that is, bus service that has headways of 15 minutes or less during the peak period or rail service. Figure 4-10 depicts the High Quality Transit Areas.

By combining increased density and accessibility to transit there is a higher likelihood that people will chose to use transit instead of driving. In addition, these same corridors and the streets that connect to other

neighborhoods are envisioned to have a greater investment in bicycle and pedestrian infrastructure such that people can choose to walk or bike for shorter distance trips. Making streets friendlier for all users of the network is the concept of complete streets that is being encouraged at the local level.

Past Planning Efforts

“Envisioning the Monterey Bay,” or the Blueprint for short, prepared by AMBAG in 2010, was the first regional effort to develop a coordinated vision of the future for the Monterey Bay Area. It described how the communities of the Monterey Bay Area could grow in a sustainable fashion over the next 25 years. It explored how the housing and transportation choices in the region can be expanded to provide a more compact land use pattern with supportive infrastructure. The Blueprint set the stage for the dialogue that planners and community stakeholders have engaged in with the development of the region’s first SCS. At its core the Blueprint was an effort to educate ourselves about the options for sustainable growth as a region prior to implementing the mandates of SB 375.

Place Types

To better analyze land use patterns and consider scenario alternatives, AMBAG created a set of place types which established a set of land use designations common to general plans for the three counties and 18 cities in the region during the development of the 2035 MTP/SCS. These place type categories are meant to act as a common “language” so that the diverse general and specific plans across the Monterey Bay Area may be compared in a consistent and standard manner.

Development of the place types began with a review of the predominant land uses and development patterns in the Monterey Bay region, leading to the creation of initial place type categories and a preliminary place type matrix. The following metrics and characteristics were established as the primary determinants of place type designations:

- Density – The general density of a particular land use, expressed as Floor to Area Ratio (FAR) and/or as dwelling units per acre
- Setting – The surrounding land use and development context
- Character – The urban and built form, including building placement, street pattern, and pedestrian or auto-orientation
- Transportation – The level of transit access, quality of the pedestrian environment, and presence of bicycle infrastructure

Based on these characteristics, a place type matrix was created and place type designation assignments were made. The Place Type Matrix was updated as part of the 2045 MTP/SCS. The assignment of place types was based primarily on existing land use designations, transit service maps and aerial imagery, but also relied upon information from local jurisdictions. The Place Type maps and descriptions of residential densities and building intensities are included in Appendix I. The 2045 MTP/SCS includes place types that transition commercial corridors into mixed use areas served by high quality transit. Outside of those mixed use areas the place types largely remain the same as the baseline.

SCS Toolkits

Developed collaboratively between AMBAG, transportation partners, local jurisdictions and stakeholders, an

SCS Implementation Toolkit provides examples of projects and best practices to help achieve regional and local sustainability goals and emission reduction targets through efforts to provide housing, jobs and services in proximity to one another and to better link them by transit and safe and convenient bicycle and pedestrian access.

The wide variety of tools are grouped in separate Infill Housing, Economic Development and Transportation sections of the Toolkit. Each of these sections opens with a summary matrix of all of its tools that indicates which ones are most applicable to the variety of settings or “Place Types” found in the region. These place types were developed prior to the Toolkit to help inform local and regional efforts to achieve MTP/SCS objectives. As individual communities in the region may include a range of place types and transitions between them, tools in the SCS Implementation Toolkit may be useful in a variety of settings. Together, any number of tools from one or more sections of the SCS toolkits can be used to improve quality of life, support investment and improve safety and accessibility in any of the diverse communities that make up the region. The SCS toolkits are available at www.ambag.org.

High Quality Transit Corridors and Stops

SB 375 defines high quality transit corridor as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. Projects qualify as a transit priority project if they are within a ½ mile of a high quality transit corridor or a major transit stop. (GC 21155 (b)) A major transit stop is defined as a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. (GC 21064.3).

Given these definitions for the purposes of the SCS, AMBAG has focused on corridors that meet the definition of high quality transit corridors as defined in SB 375. For the sake of consistency in this document, major transit stops are referred to as high quality transit stops and include rail meeting the definition of the government code. In addition, the service provided at major transit stops is referred to as high quality transit service

Opportunity Areas

Senate Bill 375 also includes provisions for CEQA streamlining for developments that meet a specific set of criteria (per definition in California Public Resources Code Section 21155). At a minimum this criteria includes proximity to high quality transit. Areas that qualify for streamlining are called “opportunity areas.” A “Sustainable Communities Opportunity Area” is an area within ½ mile of an existing or planned “high quality transit corridor” (per definition in California Public Resources Code Section 21155(a)) or “major stop” (per California Public Resources Code Section 21064.3) that has the potential for transit oriented development including mixed use. High quality transit is service with headways of 15 minutes or less during peak period or rail service.

During the past year, AMBAG worked with local jurisdictions to update Opportunity Areas in the region. Opportunity Areas are places in the region with the highest chance for successful sustainable growth in the future; they are generally located where Transit Priority Areas (TPAs) and Economic Development Areas (EDAs) within the AMBAG region overlap. This effort also identified Transit Priority Areas as locations that have both supportive land use densities and high quality transit service/connections for each Opportunity Area. Opportunity Areas are used to identify a set of potential Transit Priority Projects that supports the SCS. The Opportunity Areas maps and descriptions are included in Appendix I.

Economic Development

The Monterey Bay Area is comprised of a diverse population and has very distinct industries that support the local economy. While the tri-county area is considered a mid-sized region, there are many jurisdictions within the area that are small and relatively rural in nature. These areas are home to the region's low income and minority populations as they are the most affordable places to live. These populations are responsible for the production of the agricultural goods that are generally considered to be the backbone of the region's economy.

Similarly, the tourism and hospitality industry, considered to be just as important as agriculture to the economy, is supported by thousands of low income minority workers. Despite the importance of these two industries to the region, jobs in these areas are mostly low income.



While low wage workers support and make possible the engine of the regional economy, they tend to live in cities that struggle to collect enough revenue to support their residents with basic services. The land value in these cities is low compared to the coastal areas, people have access to fewer services, and are isolated from the more well-marketed tourist attractions near the ocean. Low land values, lack of infrastructure and small, dispersed populations make it difficult to attract development. In addition, the jobs that provide the livelihood for many of these workers are a far commute from the jurisdiction in which they live. The combination of these factors creates a persistent jobs/housing imbalance within the region.

Often jobs/housing imbalances are tackled by implementing a combination of mixed use and infill development as well as increased transportation investment. However, applying this approach regionwide does not take into account the attractiveness of different markets for development in any given jurisdiction. Development markets are complex and land use policies or goals that do not consider the market potential for varying types of development will not be successful.

Previous studies have shown that these low cost areas may not yield a high enough residual land value for developers to find mixed use or residential development profitable. Assuming that development in the form

of mixed use will help to address the need for jobs in low cost areas ignores the reality of market conditions. Changes in policy, construction costs, pricing, and other factors could help with long term financial feasibility of development in these areas.

In the short term, it may be appropriate to encourage commercial types of development in these areas as this type of development has been shown to yield higher residual land values, with a long term strategy towards mixed use. Until then, economic development policies that help to create jobs and attract commercial development could greatly benefit the population by providing better access to services as well creating jobs closer to their home.

Traditionally economic development in this region has been the responsibility of each local jurisdiction. However, the mandates of SB 375 require the MPO to consider land use within the 2040 MTP/SCS. As a regional dialogue regarding the variety of land use in the region began, it became apparent that the transportation hurdles in the region cannot be addressed in isolation of the regional economy.



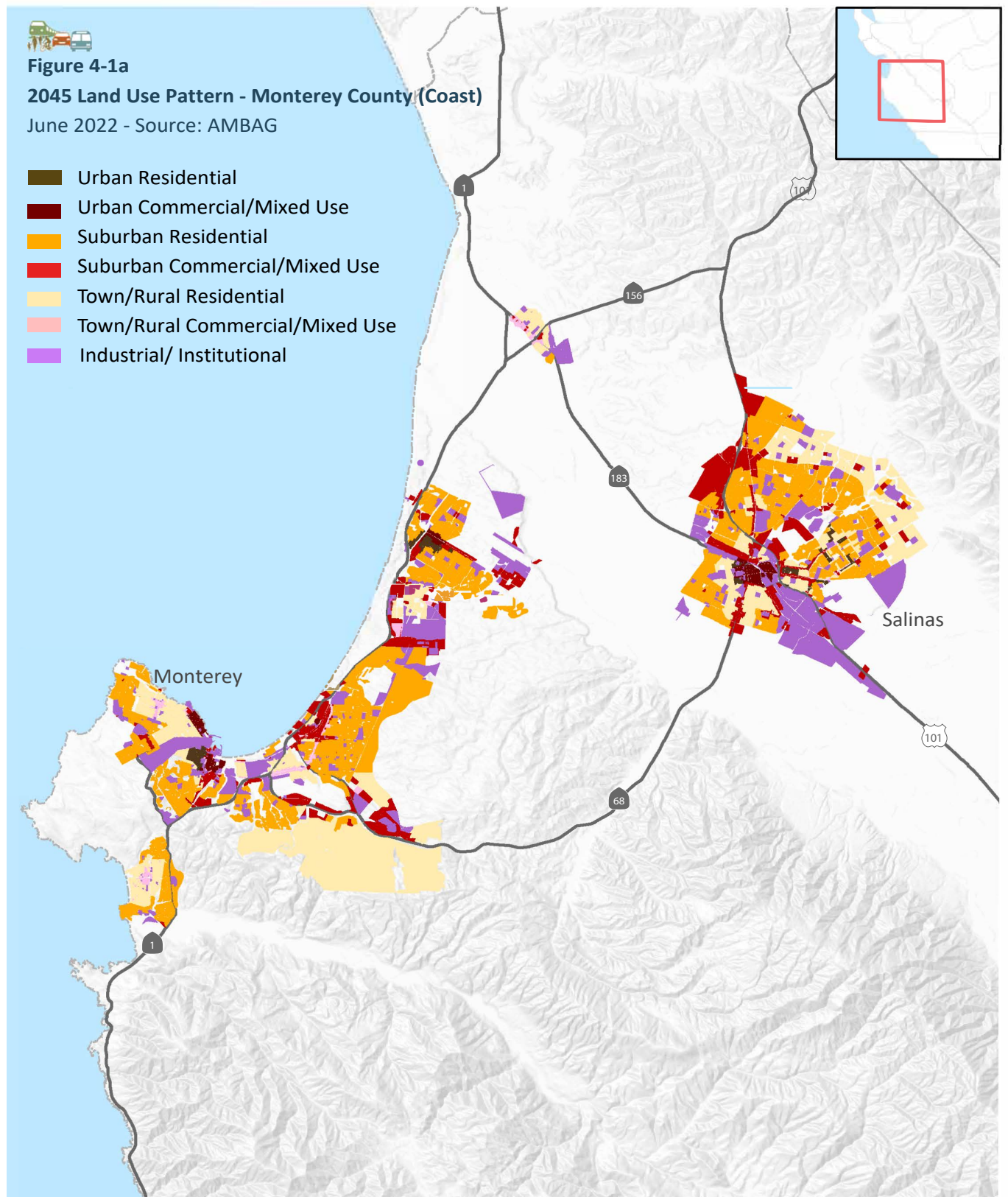
Previous analysis utilizing developer interviews regarding the feasibility of mixed use development in the region found that the highest barriers to development are fees, risks and uncertainties associated with the entitlement process. Fees exceed 10 percent of development costs in many jurisdictions in the region; this can prove cost prohibitive for mixed use development. To further exacerbate the issue, fees are higher in the mid to low cost areas of the region, where achievable price points are lower compared to the high cost areas of the region where achievable price points are higher. Fee reductions would reduce costs and thus enhance financial returns for new development.

Perceived uncertainty associated with the entitlement process also appears to be a barrier to new development. While developers may target a 15 percent return on cost, many would accept a lower return if risk and uncertainty were minimized. A reliable entitlement process could therefore enhance the feasibility of future development.

In addition to jobs/housing and land use policies, transportation strategies to provide alternative means to driving alone can also impact the regional economy. By providing better and more transportation alternatives the region can reduce the amount of money people must spend on transportation thereby injecting that same money back into the local economy.

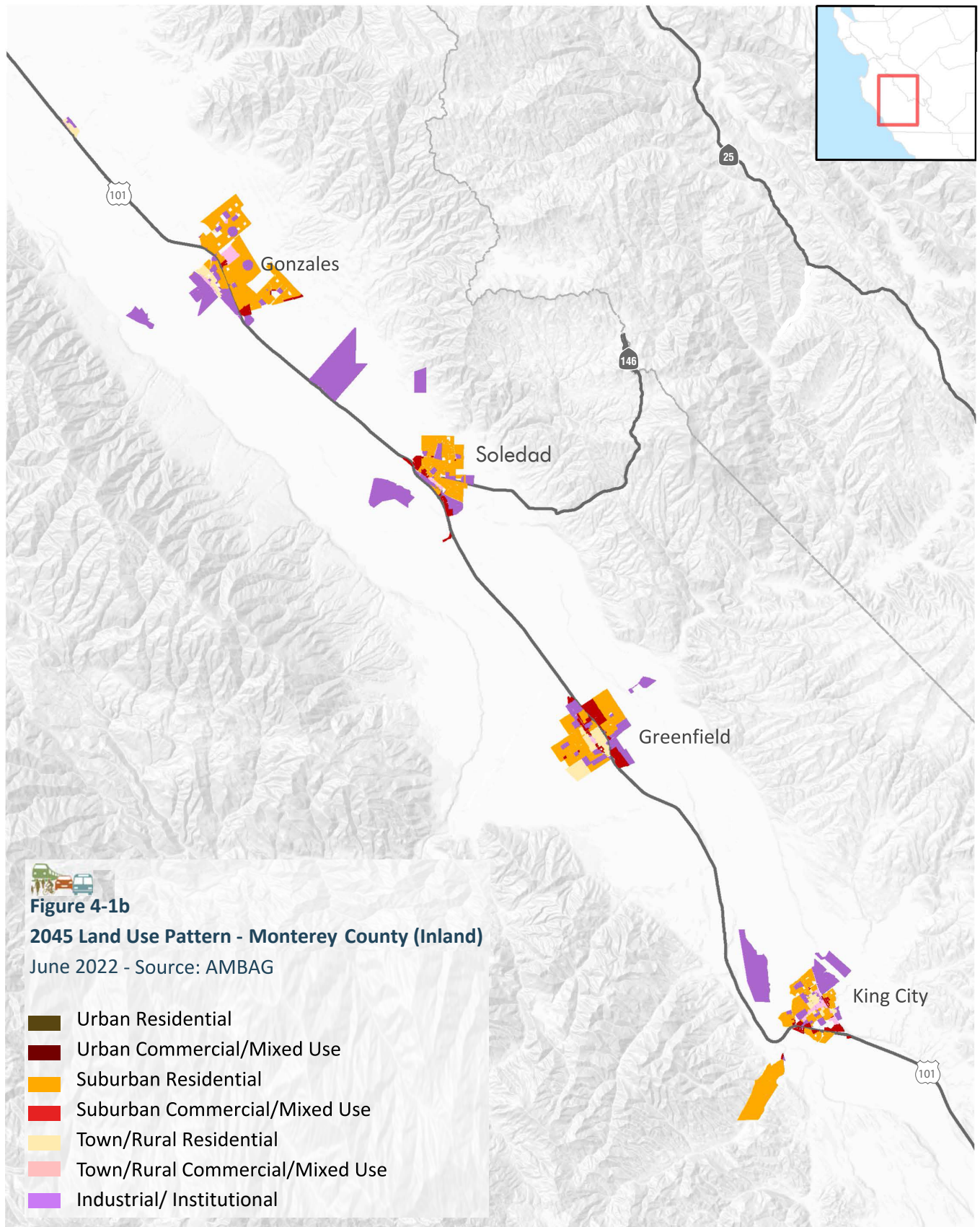
There are extreme differences in housing and economic characteristics of the jurisdictions within the region. To that end, the approach taken with land use and transportation investments should not be the same throughout the region. To achieve a higher quality of life and implement the policies and goals outlined in Chapter 1, it is important to invest more regional effort into understanding this diversity so that regional land use and transportation strategies take into account and respond appropriately to the needs of all jurisdictions.

Figure 4-1a: 2045 Land Use Pattern North Monterey County



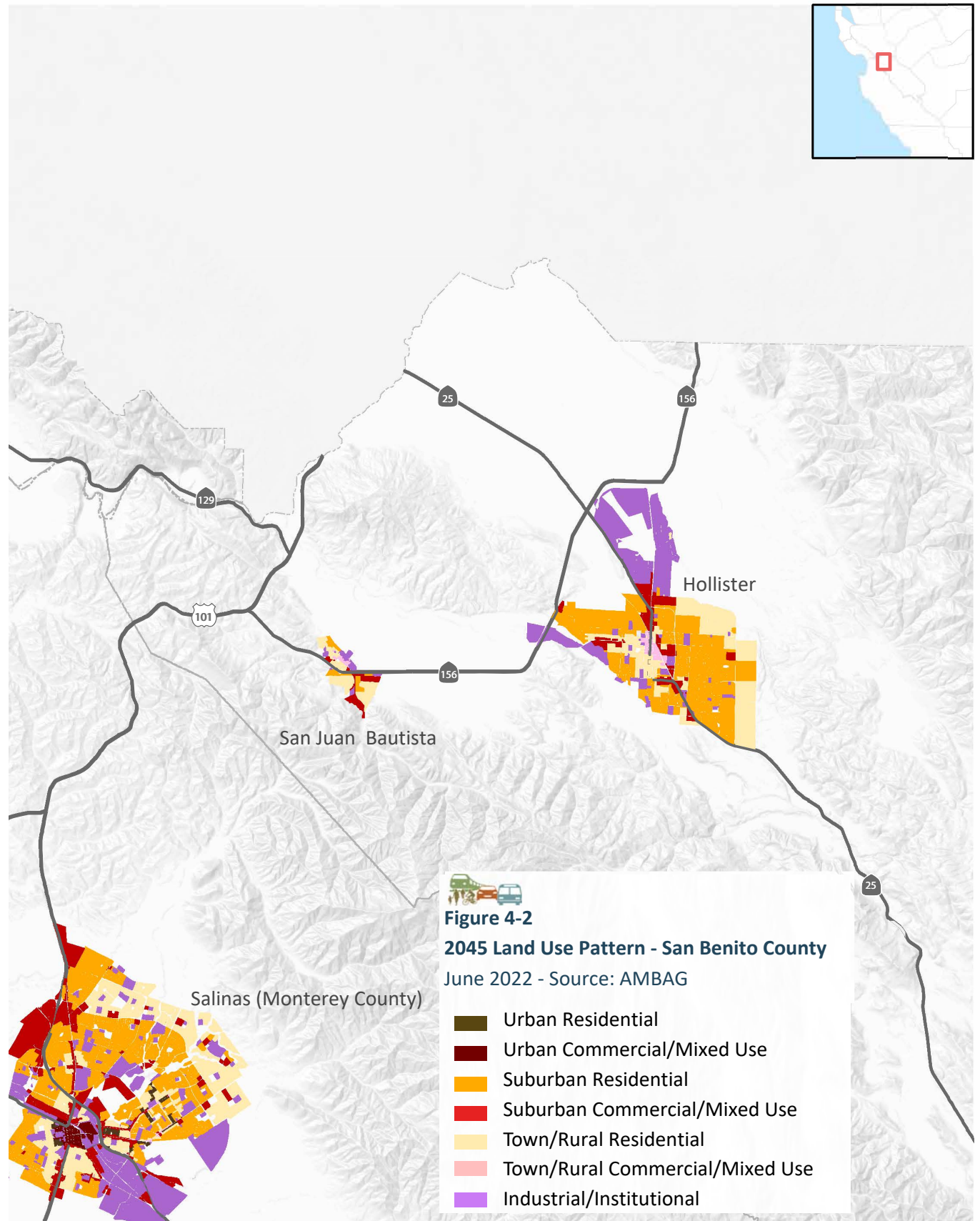
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Figure 4-1b: 2045 Land Use Pattern South Monterey County



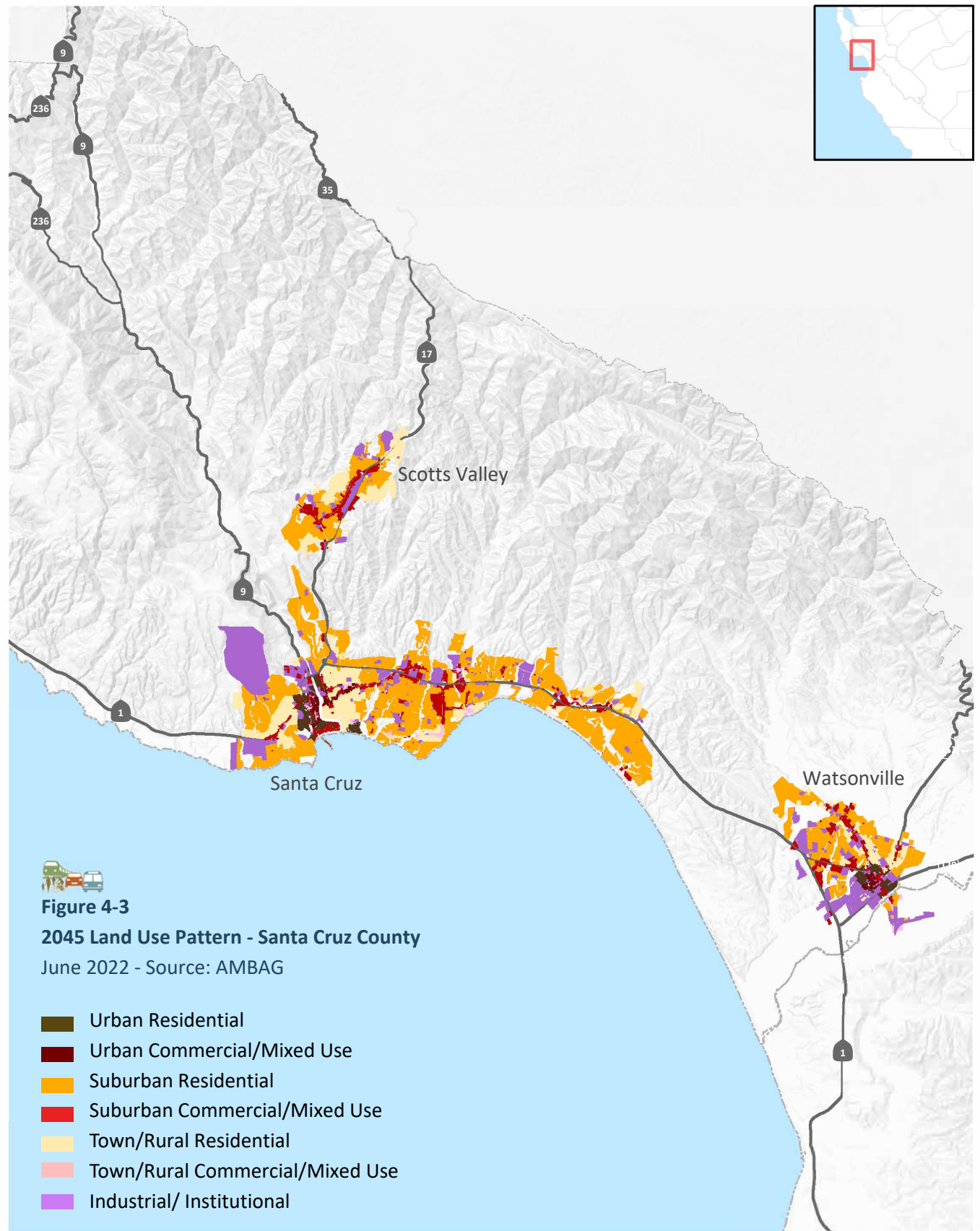
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Figure 4-2: 2040 Land Use Pattern San Benito County



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Figure 4-3: 2040 Land Use Pattern Santa Cruz County



The implementation strategies included in this 2045 MTP/SCS include a series of strategies focused solely on economic development and better understanding the dynamics of rural and low cost areas so that the needs and interests of these populations are better reflected in the regional planning process.

AMBAG developed a set of SCS implementation toolkits to help local jurisdictions and other organizations implement the SCS. The Economic Development Toolkit targets providing funding for infrastructure that will support infill housing and transportation improvements.

Transportation System and Programs

Integrated Multimodal Network

The 2045 MTP/SCS calls for an expanded transportation network that will complement the overall land use pattern. Working together, these complementary land use and transportation strategies can significantly reduce GHG by increasing transit ridership, increasing walking and biking, and reducing the auto trips.

Transit

As shown in Figure 4-4, the 2040 MTP/SCS calls for an expansion of the public transit network and transit service on new and existing routes, resulting in greater transit accessibility and connectivity throughout the region. The 2045 MTP/SCS introduces bus rapid transit and rail passenger service in the region in key corridors. These include the rail extension to Monterey County and bus rapid transit services in Monterey County and bus on shoulder transit service in Santa Cruz County along Highway 1.

Roadways

The 2045 MTP/SCS includes strategic capacity and technology enhancements to existing highways (as shown in Figure 4-5) as well as local streets. These enhancements, combined with transit, rail and active transportation improvements complement the preferred land use pattern and support the expected growth throughout the region. The overall land use pattern relies on the development of high quality transit stations and efficient transportation corridors, which leads to significant GHG reductions and other benefits due to a higher walk/bike mode share, more transit use, and shorter auto trips.

Active Transportation

The 2045 MTP/SCS also includes a notable increase in the regional active transportation network. Figure 4-6 shows the bicycle network in 2045. Active transportation is an essential part of the region's transportation system, is low cost, does not produce greenhouse gases, can help reduce roadway congestion, and increases health and the quality of life of residents. Active transportation will receive nearly \$1 billion or nearly seven percent in available revenues under the 2045 MTP/SCS. In addition, 42 percent of the region's local streets and roads projects include Active Transportation components, representing more than an additional \$1 billion in active transportation investments. This emphasis signifies an important opportunity to advance the goals of SB 375 by increasing non-motorized modes of transportation, thereby expanding access to transit and improving public health and air quality. The Regional Transportation Planning Agencies- Transportation Agency for Monterey County, Santa Cruz County Regional Transportation Commission and San Benito Council of Governments- worked closely with cities and counties to identify a list of projects that will add and enhance walking and biking facilities to make these modes more attractive for short distance trips, including trips to access transit. In addition, the RTPAs developed the Regional Complete Streets Guidelines to assist local jurisdictions in project design and implementation. The guidelines can be found in Appendix H.

Figure 4-4: 2045 Regional Transit Network



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Figure 4-5: 2045 Regional Highway Network



Programs and Strategies

In addition to infrastructure improvements to the transportation network there are less costly programs and strategies that can improve the flow of traffic on the transportation network as well as the effectiveness of the transportation system as a whole.

Transportation Systems Management

A variety of tools and strategies are necessary to effectively operate and manage transportation infrastructure as a coordinated regional system, including managing the roadway network, transit system, and active transportation facilities. Transportation Systems Management (TSM) could help operators manage demands on different parts of the transportation system, including bus and rail lines, major transit centers, and roads and highways. The ultimate goal is to ensure that people have the information they need to travel seamlessly through the region's entire transportation system.

TSM measures support the goals of the 2045 MTP/SCS by making improvements to improve operational efficiency. These techniques contribute to improved traffic flow, better air quality, improved system accessibility, and safety. The following TSM measures support the forecasted land use development pattern of the 2045 MTP/SCS:

- Enhanced incident management
- Ramp metering
- Traffic signal synchronization
- Improved data collection

Transportation Demand Management

Transportation Demand Management (TDM) refers to policies and programs that help reduce commute-related traffic congestion. Typical TDM programs promote carpooling, vanpooling, taking transit, biking, and walking to work. When used widely, these alternatives—along with telework and compressed work schedules—can significantly reduce congestion on our region's roadways. During the COVID-19 pandemic, many people worked from home during stay at home orders. As we emerge from the pandemic, it will be important to encourage and support employers and employees to continue to work from home.

In addition to the transportation network, the 2045 MTP/SCS also relies on strategic and extensive TDM measures that support planned land use patterns. These cost-effective strategies improve the effectiveness of the transportation system by supporting a shift from single occupancy vehicle use to other alternatives. TDM measures will receive a total of more than \$127 million in available revenues.

The 2045 MTP/SCS employs the following TDM measures to improve mobility and access:

- Promoting telecommuting and flexible work schedules
- Complete streets improvements to increase first mile/last mile connectivity
- Expanding vanpool programs
- Expanding traveler information systems

Figure 4-6: 2045 Regional Bicycle Network



Public Health

The 2045 MTP/SCS recognizes the impact that transportation and land use decisions have on the health of the region's residents. A substantial body of research shows that certain aspects of the transportation infrastructure, including public transit, sidewalks and safe street crossings near schools, and bicycle paths, are associated with more walking and bicycling, greater physical activity, and lower obesity rates. Local jurisdictions implementing Health in All Policies strategies can greatly help improve public health in local communities. The Plan supports the integration of transportation and land use policies to promote improved public health. The 2045 MTP/SCS seeks to promote active transportation options, and a decrease in bicycle and pedestrian fatalities and injuries through increased funding of active transportation facilities and transportation demand management measures.

The 2045 MTP/SCS also sets forth a vision for a less carbon intensive vehicle fleet. Through partial zero and zero-emission vehicle technologies, the 2045 MTP/SCS promotes a more sustainable future for the region that includes less tail pipe emissions from the vehicles that are on the road.

Energy and Alternative Fuels

The transportation of people and goods in cars, trucks, buses, and on motorcycles is the single largest source of GHG emissions in the region. The levels of fuel consumption and GHG partly result from the region's reliance on petroleum-based gasoline and diesel fuels, as well as the average fuel efficiency of vehicles.

The region's need for gasoline and diesel is projected to decline from about 880,000 gallons per day in 2015 to about 715,000 gallons per day in 2045. Meanwhile the region's transportation electricity need is projected to increase from about 20,000 kWh a day in 2015 to 1.3 million kWh per day in 2045. The projected reduction in fuel consumption is due in large part to state fuel efficiency standards for vehicles and state mandated increases in the supply and use of alternative transportation fuels. The increase in plug-in hybrids and electric vehicle adoption is driving the increase in the transportation electricity need. Electric vehicles, in particular, are an important alternative to conventional vehicles as they reduce greenhouse gas emissions resulting from the consumption of fossil fuels.

Increasing electric vehicle use will help achieve statewide policies aimed at reducing greenhouse gas emissions. California has a number of policies to encourage widespread adoption of electric vehicles.

AB 32 requires the state to reduce emissions to 1990 levels by 2020, and Executive Order S-3-05 calls for a 80 percent reduction below 1990 levels by 2050. Key elements of the state's AB 32 Scoping Plan for achieving these goals include the Zero Emissions Vehicle Program and Low Carbon Fuel Standards. It is expected that as many as one-third of the fleet in California by 2030 will need to be made up of battery electric vehicles, plug-in hybrids, and fuel cell vehicles to help meet emissions reduction goals.

California Executive Order B-16-2012 seeks to have over 1.5 million zero emission vehicles on the road by 2025. The Electrification Coalition's Electrification Roadmap suggests that to reduce the transportation sector's reliance on oil, 75 percent of light duty vehicle miles traveled should be electrified by 2040. For the Monterey Bay Area, this would equate to more than 18 million daily miles driven by the region's residents.

SB 32 (Pavley, 2016) extends the AB 32 required reductions of GHG emissions by requiring a GHG reduction of at least 40 percent of 1990 levels by 2030.

California has also adopted a low carbon fuel standard that will require a reduction in the carbon intensity of California's transportation fuels by at least 10 percent by 2020. This will be achieved by offering a variety of fuel options for personal vehicles that include electricity, natural gas, propane, and biofuels.

Issued in September 2020, EO N-79-20 calls for elimination of new internal combustion passenger vehicles sales by 2035. By setting a course to end sales of internal combustion passenger vehicles by 2035, the Executive Order establishes a target for the transportation sector that helps put the state on a path to carbon neutrality by 2045.

AMBAG has taken steps to assess what regional infrastructure is needed to accommodate more alternative fuel choices across the region. In 2012, AMBAG adopted the Electric Vehicle Infrastructure for the Monterey Bay Area Plan. This plan presents a siting prioritization method to help identify potential charging locations and presents a framework for establishing a robust electric vehicle charging network in the region. The siting analysis in the plan provides guidance to local and regional stakeholders based on potential demand for electric vehicle charging stations. The three major goals of the siting analysis are:

- Provide charging opportunities for plug-in electric vehicle owners that lack access to home charging.
- Extend the range of plug-in electric vehicle for intra- and interregional travel along various corridors.
- Maximize all electric miles by providing opportunities for charging while minimizing the risk of stranded plug-in electric vehicles.

This study was the precursor to the Monterey Bay Plug-In Electric Vehicle Readiness Plan (2013), a comprehensive regional plan to promote plug-in electric vehicle adoption throughout the region.

In 2013, AMBAG and other regional organizations completed the Monterey Bay Plug-In Electric Vehicle Readiness Plan. The goal of this plan is to encourage the mass adoption of plug-in electric vehicles in the region and reduce greenhouse gas emissions by providing a toolbox of recommended approaches for public, private, and non-profit organizations. These tools range from innovative approaches to plug-in electric vehicle marketing and streamlining electric vehicle supply equipment permitting, to guidelines on establishing an electric vehicle fleet. The GV Readiness Plan identifies specific regional targets for significantly expanding plug-in electric vehicle adoption in the Monterey Bay Area by 2015, 2020 and 2025.

Electric Vehicles (EVs) use clean sources of power such as electricity and hydrogen. Unlike vehicles that use internal combustion engines to burn fossil fuels EVs do not produce harmful exhaust gases such as CO₂ and ozone. EV technologies are becoming more popular and affordable, and new EVs are appearing on the roads all the time. EVs include battery electric vehicles and hydrogen fuel cell vehicles, and they come in the form of passenger vehicles, light- and medium-duty vehicles (e.g., pickup trucks and delivery vehicles), and heavy-duty vehicles (e.g., semi-trucks and buses). The Plan strives to integrate EV charging infrastructure stations along key corridors.

AMBAG and our transportation partners continue to work with local jurisdictions and other organizations to implement charging stations and to increase adoption of electric vehicles around the region.

AMBAG is working with the Santa Barbara County Association of Governments (SBCAG) and the San Luis Obispo Council of Governments (SLOCOG) to develop the Central Coast Zero Electric Vehicle Strategy (CCZEVS). The CCZEVS will identify gaps and opportunities to implement ZEV infrastructure on the Central Coast, including on or near the State Highway System, major freight corridors, and transit hubs. This strategy is important as it will seek to accelerate large scale, affordable, and equitable ZEV development across all altitudes of the public sphere in the wake of Governor Newsom's EO N-79-20. This strategy will directly advance the goals outlined in the 2045 MTP/SCS as well as the goals of CalSTA's CAPTI.



The region's open space is at the crux of its tourist economy. Preserving it is a high priority for residents and businesses.



Agriculture is the economic engine of the region and is an important asset to preserve.

AMBAG Sustainability Program

AMBAG is committed to equitably enhancing the sustainability and climate resiliency of the Monterey Bay. The objective of the AMBAG Sustainability Program is to implement initiatives that: assist jurisdictions in meeting their sustainability goals, enable deeper regional collaboration on sustainability issues, and help residents, small businesses, and non-profits to reduce their energy usage, GHG emissions, and energy costs.

AMBAG Sustainability Program initiatives are designed to focus on three priorities: providing project assistance, furthering climate planning, and building sustainability awareness. Project assistance initiatives seek to achieve the installation of energy efficient or demand response equipment by identifying potential projects, connecting them to funding opportunities, and providing technical assistance that facilitate project implementation. Climate planning initiatives seek to support climate mitigation and adaptation planning in the Monterey Bay Area by providing no cost GHG inventories and climate action planning technical assistance to our jurisdictions. Sustainability awareness initiatives seek to provide learning resources and opportunities to residents as well professionals throughout the Monterey Bay Area in order to promote sustainability.

Climate Change and Adaptation Planning

The Monterey Bay Region needs to prepare for climate uncertainty in terms of mitigation and adaptation. Climate change adaptation and mitigation are both important and needed. The region can help mitigate climate change by reducing emissions and supporting climate smart policies. The region can adapt by identifying how we're vulnerable to climate change and protect communities from the dangers of sea level rise and natural hazards.

The transportation sector is a key contributor of GHGs, but also is threatened by the impacts of continued climate change. Climate Action Plans (CAPS) includes efforts to both reduce GHG emissions and prepare communities for the impacts of climate change. CAPs typically focus on reducing GHG emissions. Climate adaptation planning is equally important and includes strategies to prepare for sea level rise, extreme heat, prolonged drought, and more destructive wildfires. Since 2006, AMBAG has provided resources to advance climate action planning in the region. The Monterey Bay region is expected to change due to climate, even under the most optimistic scenarios. Potential impacts include more frequent and intense heat waves and wildfires, rising sea levels and higher storm surges, the loss of native plant and animal species, and a higher demand for electricity, particularly during peak periods. Developing and implementing measures to help the region adapt to these potential changes will be critical in protecting the regional transportation network.

Despite efforts to reduce GHG emissions, the consequences of global climate change continue to affect people around the world, public health, national and local economies, and the planet's natural environment. Communities and people across our region will have to adjust how they respond to the impacts of climate change today and become more resilient as they face future impacts. Adaptation is the way communities and people change how they respond to the impacts of climate change. Becoming more resilient means that the communities, local and regional economies, and natural resources and recreational spaces that make our region special can endure, recover, and thrive in response to impacts of ongoing climate change. Anticipated impacts for the Monterey Bay region include hotter and more frequent heat waves, prolonged droughts, more destructive wildfires and more extreme precipitation and flooding, and rising sea levels and destructive storm surges. To advance the region's climate adaptation and resilience efforts, AMBAG works with partners to advance regional projects, offers resources to member agencies, and analyzes vulnerabilities of the transportation system, including which areas are prone to flooding and know to keep critical infrastructure available during an emergency. The transportation system envisioned in the 2045 MTP/SCS will incorporate strategies to improve regional resilience and better adapt to climate change impacts. For example, the

transportation system must consider travel patterns and rapid mobility for evacuations and emergency response. Also, coastal infrastructure must be designed to withstand rising seas and storm surge.

More frequent hot days and prolonged periods of extreme heat will increase the risk of buckling highways and railroad tracks. This could lead to increased and more frequent maintenance costs, premature deterioration, or even the failure of some transportation infrastructure. More frequent and severe wildfires that are followed by rainfall will increase the risk of mudslides and erosion. This could disrupt major infrastructure such as roadways and rail lines. Rising sea levels and stronger storm surges would likely impact communities, roadways, railways and other vital lines of coastal transportation. Existing fortifications may need to be enhanced as sea levels rise and storm surges intensify, and areas not previously considered at risk may need to be protected. Preparing transportation infrastructure for climate change impacts is a new priority as future projects are designed and the current system is maintained.

The tools and methodologies for evaluating and adapting to such impacts are still in the early stages of development and will require ongoing monitoring.

Central Coast Highway 1 Climate Resiliency Study

The Central Coast Highway 1 Climate Resiliency Study is a collaborative project between the AMBAG, Caltrans, the Nature Conservancy, and the Center for Blue Economy. The Highway 1 corridor and railway near Elkhorn Slough presents significant challenges to the future of transportation in the Monterey Bay region under conditions of climate change and sea level rise. This multi-benefit planning study identifies the needs and opportunities to improve transportation mobility, safety and efficiency, promote healthy coastal habitats, and provide economic security and benefits to the local community.

Driven by a need to sustain this critical transportation corridor and to protect the iconic coastal habitat in the face of the unique challenges posed by climate change, a diverse partnership was formed in the Monterey Bay area to find innovative ways to address this complex transportation adaptation problem by exploring creative transportation solutions and the use of natural infrastructure approaches to promote transportation, habitat and economic resilience for the region. The study was completed in summer 2020.

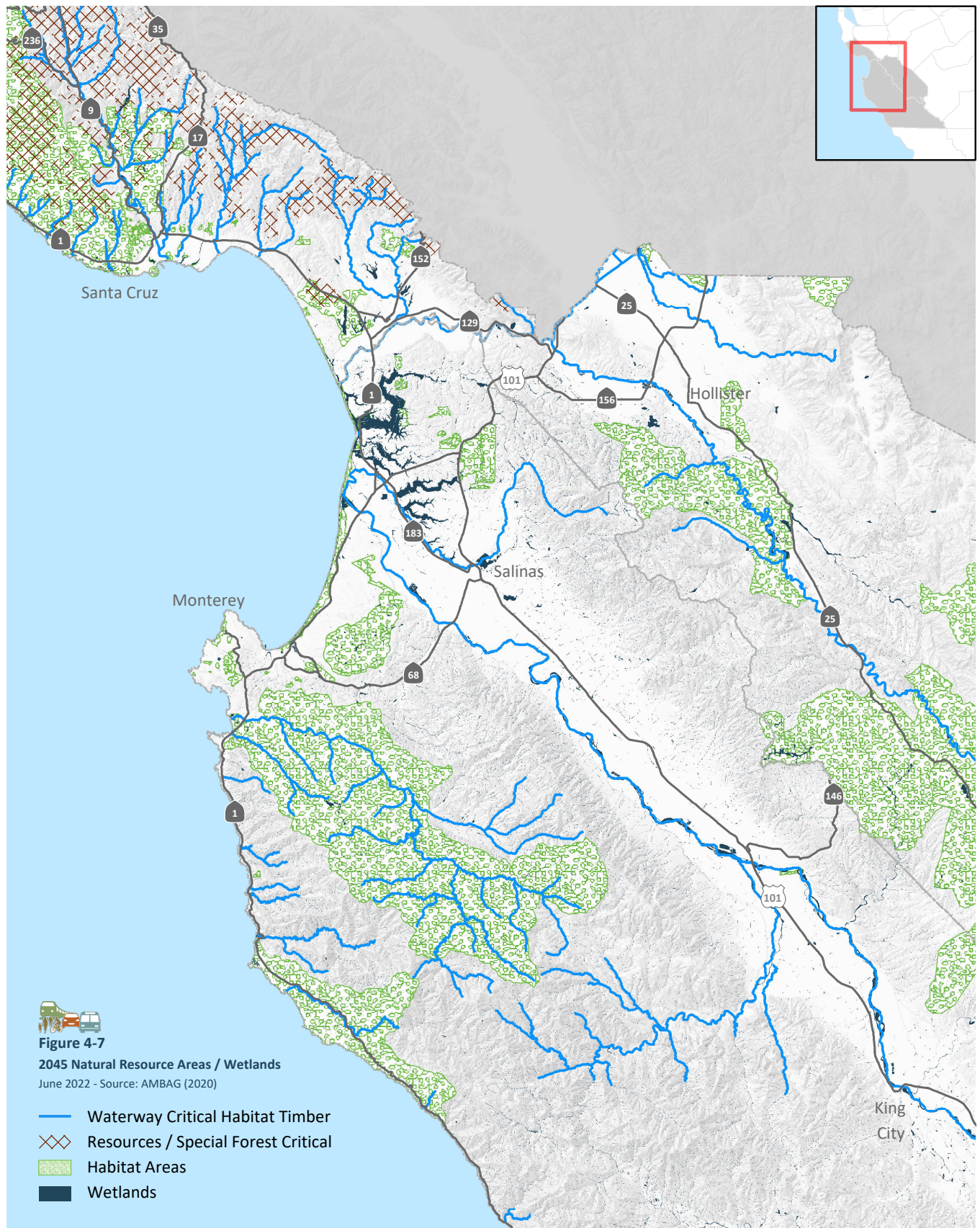
Resource Areas, Farmland and Mitigation

Central coast residents share a strong attachment to the region's open spaces and are economically dependent on the accessibility of this open space. Equally important to the region's economic wellbeing are the thousands of acres of farmland that produce billions of dollars' worth of berries and other produce. In addition to identifying areas where development is projected to occur, the SCS identified protected parklands and open space, natural resource areas, and farmland using the best practically available scientific information. AMBAG consulted with the appropriate State and local agencies responsible for land use, natural resources, environmental protection, conservation and historic preservation.

Of the 3.3 million acres within the Monterey Bay region, about 20 percent have been previously conserved as parks or open space and are included in the SCS land use pattern. These lands range from public use parks to rural open space and U.S. Forest Service Lands. As part of this regional greenprint analysis, AMBAG assembled and applied the following additional data layers.

- Protected, sensitive, or special status species as defined by local, state or federal agencies
- Lands subject to conservation, agricultural easements and the Williamson Act and areas designated by the State Mining and Geology Board as areas of statewide significance
- Areas designated for open space or agricultural uses in local general plans

Figure 4-7: 2045 Natural Resource Areas



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Figure 4-8
2045 Open Space
 June 2022 - Source: AMBAG

Legend:
 Dedicated Open Space

- Farmland classified as prime or unique or of statewide importance designation
- Areas containing biological resources
- Administrative boundary restrictions
- Habitat connectivity

Figures 4-8 and 4-9 show the location of these parks, open space and farmlands.

AMBAG is involved in resiliency planning efforts such as the Pajaro River Watershed Flood Protection and the Elkhorn Slough Natural Infrastructure Pilot project on the Pacific Coast Highway. In addition, regional efforts have been ongoing in wildlife corridor planning.

The region is incorporating environmental mitigation as much as possible into corridor planning efforts and funding has been included in the recently approved local sales tax measures. Federal Land Management Agencies (FLMAs) are engaged early on in the development of the 2045 MTP/SCS and the Transportation Improvement Program (TIP) to support the transportation needs and access routes that connect public roads to Federal lands.

Protecting the Region's Natural Resources

The SCS land use pattern incorporates adopted habitat plans as well as the conservation of other sensitive resource lands such as steep slopes, wetlands, and floodplains as reflected in plans by local jurisdictions. These local and regional plans ensure the conservation of plant and animal species, and natural habitats through low density zoning, conservation easements, and land purchases.

One of the largest habitat plans to date is the Fort Ord Habitat Management Plan, which will eventually become the Habitat Conservation Plan. In 1997, after the closure of the former Fort Ord, the Fort Ord Reuse Authority made a commitment to conserve nearly two-thirds of the former army base as open space. The Habitat Management Plan is primarily funded by federal, state, and local government annual appropriations, whereas the Habitat Conservation Plan will provide additional habitat management resources through collection of Fort Ord Reuse Authority Development Fees or Community Facilities District Special Tax payments from reuse of the former Fort Ord. The Habitat Management Plan does not provide incidental take coverage of state and federal listed species to state and local entities, whereas the Habitat Conservation Plan, if approved by federal and state Wildlife Agencies, will provide incidental take coverage for a period of 50 years to allow restoration of sensitive habitats and a regional framework for habitat protection and base reuse. Figure 4-7 shows the location of the region's natural resources.

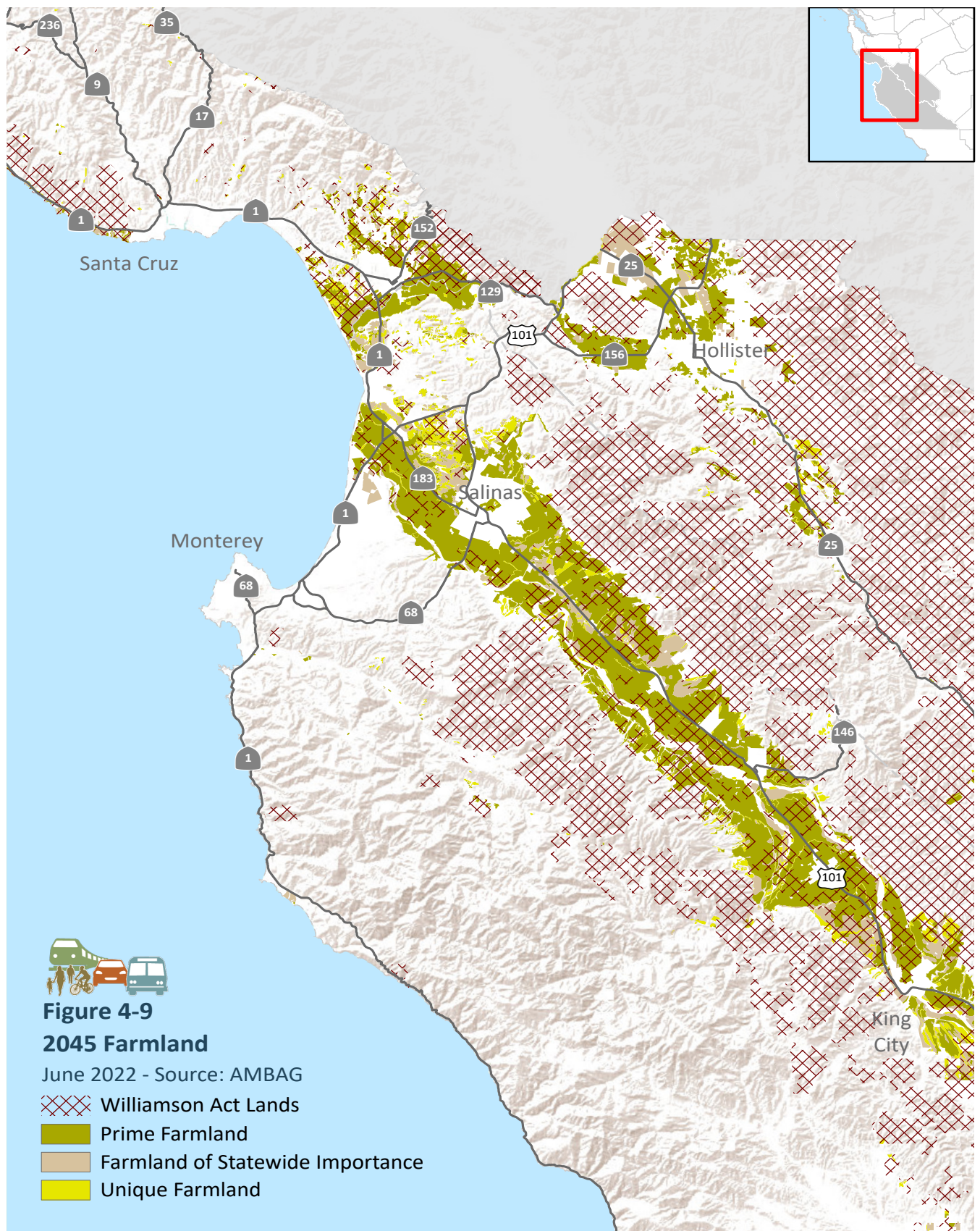
Regional Conservation Investment Strategy (RCIS)

AB 2087 (2016) established a conservation planning tool called a Regional Conservation Investment Strategy (RCIS) with the goals to:

- Identify high-value conservation and habitat enhancement opportunities within a region that will aid in species recovery, adaptation to climate change, and resiliency in the face of development pressures.
- Provide a science-based guide for voluntary conservation and mitigation actions implemented by a state agency, local governments, non-government organizations (NGOs) or private entities.

In addition to providing important biological information that policy makers and land-use planners may use to balance wildlife and development interests, an RCIS also allows public and private entities to enter into

Figure 4-9: Farmland



Mitigation Credit Agreements (MCAs). MCAs create mitigation credits in advance of development impacts by implementing conservation or enhancement actions to achieve the goals and strategies outlined in an RCIS. In exchange, infrastructure entities or other developers may use this advance mitigation tool to offset impacts of future development projects. RCISs may be used to guide mitigation funding to key areas of biological importance. A state agency or private entity may enter into an MCA if the mitigation site is within an approved RCIS area.

The Transportation Agency for Monterey County (TAMC) developed the Monterey County RCIS to assess the vulnerability of species and habitat to climate change related stressors (drought, wildfire, and landslides, etc.); develop conservation strategies to improve resiliency from the identified stressors; and defined a framework to finance the implementation of these conservation strategies as compensatory mitigation from new transportation improvements. The types of conservation strategies that are eligible to be included in an RCIS will both directly and indirectly contribute to the climate resiliency of Monterey County's transportation infrastructure, including wildlife crossings, wetlands restoration, and habitat acquisition and conservation. The Monterey County RCIS was completed in 2021.

The Santa Cruz County Regional Transportation Commission (SCCRTC) in coordination with the Santa Cruz County Resource Conservation District, is also developing a RCIS. The Santa Cruz County RCIS will be reviewed and approved by the California Department of Fish and Wildlife. Once finalized, the Santa Cruz County RCIS may help expedite delivery of transportation projects by facilitating regional advance mitigation planning: a process in which the environmental mitigation for impacts from multiple projects can be pooled and conducted in advance, resulting in larger conservation projects that have greater benefits, and potential mitigation for transportation projects is identified in advance of final project design. The Santa Cruz County RCIS is scheduled to be completed in 2022.

Construction Aggregate

In addition to natural habitat the region is home to another important resource, aggregates. Aggregates are used in variety of construction projects, such as roads, bridges, streets, bricks and concrete. Every town and city, along with every road connecting them are built and are maintained with aggregates. More than 90 percent of asphalt pavements and 80 percent of concrete are aggregates. Natural aggregates make up the largest component of nonfuel mineral materials consumed in the United States. In highways, natural aggregates are mixed into asphalt and concrete and are used as road base. In addition to construction projects, many items such as, paint, paper, plastics, and glass also require sand, gravel, or crushed stone. Aggregates are also used as soil erosion control programs and water purification. In addition to new resources, aggregate product can be recycled and repurposed into new construction projects.

Historic mineral production within the Monterey Bay Area included sand and gravel mining for construction materials, mining for industrial materials (diatomite, clay, quartz, and dimension stone) and metallic minerals (chromite, placer gold, manganese, mercury, platinum, and silver). The public depends on several categories of minerals found in Monterey, San Benito and Santa Cruz Counties for a variety of everyday uses. For example, minerals such as sand and gravel are used to make concrete for buildings and asphalt to pave roads.

Natural aggregates, which consist of crushed stone and sand and gravel, are among the most abundant natural resources and a major basic raw material used by construction, agriculture, and industries employing complex chemical and metallurgical processes. Despite the low value of the basic products, natural aggregates are a major contributor to and an indicator of the economic well-being of the nation. Of the non-metallic minerals, construction-grade aggregate is the most abundant and commonly used mineral resource in the Monterey Bay Area.

Figure 4-10: 2045 High Quality Transit



Protecting the Region's Farmland

The Farmland Mapping and Monitoring Program, administered by the Division of Land Resource Protection at the California Department of Conservation, produces maps and statistical data to analyze impacts to California's agricultural resources. To characterize existing and potential farmland, agricultural lands are rated according to soil quality and irrigation status. Farmland Mapping and Monitoring Program maps are updated every two years using aerial photographs, a geographic information system, public review, and field reconnaissance. Lands important for agriculture are placed in one of four categories of productivity established by the United States Department of Agriculture. These lands are categorized according to their specific qualities of soil, slope, degree of wetness, flooding hazards and other factors. Within the Monterey Bay region, the Farmland Mapping and Monitoring Program has identified 313,188 acres of land as "Important Agricultural Lands" combined with Williamson Act Lands. The Monterey Bay Area has a total of 1,668,261 acres of preserved agricultural land which represents 51 percent of the region's total land area.

These lands are reflected in the SCS land use pattern and they are not threatened due to zoning ordinances or the purchase of land for conservation easements. In the SCS land use pattern, 97 percent of the region's existing agricultural land is expected to remain available for agriculture. Ninety-six percent of the region's agricultural land is planned for agricultural use only, and less than one percent is planned as low density, rural residential land that allows and often encourages agricultural use.

Figure 4-9 includes agricultural preserves such as areas under Williamson Act contracts. The California Land Conservation Act, commonly referred to as the Williamson Act, enables local governments to enter into contracts with private landowners to restrict specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based upon farming and open space uses as opposed to full market value.

Environmental Mitigation

Transportation investments have the potential to impact the environment both positively and negatively. The 2045 MTP/SCS was extensively evaluated for its potential impacts as part of the required California Environmental Quality Act (CEQA) environmental review. The evaluation is available as the Environmental Impact Report.

In order to minimize the negative environmental impacts of transportation projects, mitigation of impacts may be necessary. Regional mitigation efforts rather than the traditional project-specific mitigation provide the greatest benefit for habitat and wildlife by leveraging resources available across a larger geographic area. Regional mitigation can result in conserving larger, scarce, multi-resource ecosystems and increase habitat connectivity which improves both the quantity and quality of habitat. AMBAG and its partner agencies are making efforts to collect data on mitigation opportunities and engage in early consultation with resource agencies in order to improve opportunities for and results of mitigation measures.

The Regional Ecological Framework Project was funded by the Strategic Highways Research Program 2, and based on Transportation Research Board Integrated Ecological Resource Framework Research (C06). The Regional Ecological Framework Project produced a series of maps identifying sensitive resource areas near planned regional transportation projects in the Monterey Bay Area Region, promoting early mitigation and better project planning among transportation agencies. By providing awareness of potential environmental conflicts early in the project development process, these maps allow transportation agencies throughout the region to engage in earlier consultation with resource agencies such as the Environmental Protection Agency, the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and other resource agencies. This early

consultation allows project proponents to adjust their projects to avoid impacting sensitive resources, reducing environmental impacts, allowing projects to move forward with fewer delays, speeding project implementation and mediating increased project costs associated with extended environmental mitigation.

The Pajaro Compass is a framework to advance voluntary conservation in the Pajaro River Watershed. The Pajaro Compass is an assessment that identifies important features on the landscape; including agriculture, biodiversity and habitat connectivity, water resources, recreation, etc.

As a regional planning document, the 2045 MTP/SCS allows for early consideration of broad mitigation strategies. In fact, the 2045 MTP/SCS must include a “discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the “plan.”

The Environmental Impact Report (EIR) associated for the 2045 MTP/SCS serves as the first tier of environmental review for identified transportation improvement projects and programmatically evaluates the environmental impacts of the Plan. The EIR identifies mitigation measures that programmatically apply to individual transportation projects based on a review of general project parameters and locations for all potentially significant environmental impacts of the 2045 MTP/SCS. Transportation project sponsors are responsible for more in-depth, project-level environmental analysis and mitigation to more precisely quantify impacts and specify mitigation measures based on project-level design details and site-specific review. However, where applicable, the 2045 MTP/SCS can provide a framework for mitigation at a regional level. The EIR will contain a Mitigation Monitoring and Reporting Program (MMRP) that is intended to ensure that the mitigation measures identified in the EIR are effectively implemented by the applicable jurisdictions and responsible agencies. The applicable jurisdictions and responsible agencies with projects contained in the 2045 MTP/SCS are encouraged to adopt the MMRP or an adaptation of it specific to its independent discretion and/or special expertise.

Wildlife Connectivity

California’s distinctive topography and climate have given rise to a remarkable diversity of habitats that support a multitude of plant and animal species. In fact, California has more species than any other state in the U.S. and has the greatest number of species that occur nowhere else in the world. Many of the places where wildlife thrive are the same as those valued for recreation and other human activities. To ensure a sustainable future for wildlife, there is a need for a collaborative approach to conservation.

The California Wildlife Action Plan examines the health of wildlife and prescribes actions to conserve wildlife and vital habitat before they become more rare and more costly to protect. The plan also promotes wildlife conservation while furthering responsible development and addressing the needs of a growing human population. The plan is required to be updated every 10 years and the last CA Wildlife Action Plan was adopted in 2015.

Wildlife corridors connect like-habitats to facilitate the movement of certain species to allow the exchange between individual populations and reestablishment after changes to a specific geographic area. In the AMBAG region, a number of wildlife connectivity planning efforts are underway in order to ensure and protect wildlife corridors.

Accommodating the Region’s Housing Needs

Addressing housing availability and affordability requires action at the local, regional, and state levels. For example, cities in the Monterey Bay region have taken steps to increase affordable housing by making the

development process faster and easier. The State of California offers grants to accelerate the production of housing and approves legislation that allows for more types of homes, like accessory dwelling units to be built statewide. Regionally, government agencies are considering how to better align housing policies with transportation initiatives because both contribute substantially to the region's cost of living.

The SCS land use pattern accommodates the more than 42,000 new households that will be needed over the next 25 years to serve a projected growth of nearly 108,000 additional people.



The SCS land use pattern addresses the needs of all economic segments of the population. Based on the capacity for planned housing development the region will be able to accommodate the projected housing needs for residents of all income levels.

Regional Housing Needs Allocation

California Housing Element law requires that every eight years, AMBAG shall develop a methodology for distributing projected housing need in four income categories – very low, low, moderate and above moderate – to local jurisdictions in Monterey and Santa Cruz Counties and sets forth a process, objectives and factors to use for that methodology. The Council of San Benito County Governments (SBtCOG) performs this function for San Benito County. This process, the Regional Housing Needs Allocation (RHNA), is coordinated by the California Department of Housing and Community Development (HCD). The 2045 MTP/SCS includes an updated RHNA. The 6th Cycle Regional Housing Needs Determination (RHND) from HCD to AMBAG is 33,274 units. SBtCOG's 6th Cycle RHND is 5,005 units.

In the past, the RHNA was conducted separately from the MTP process. SB 375 now links the RHNA and MTP/SCS processes to better integrate housing, land use, and transportation planning. Integrating processes helps ensure that the state's housing goals are met. The RHNA occurs before each housing element cycle, which SB 375 changed from a five-year to an eight-year cycle.

The AMBAG region received its RHNA Determination (for Monterey and Santa Cruz Counties) from HCD for the housing element cycle (2023-2031). The AMBAG RHNA Plan allocates the RHNA Determination by jurisdiction. (For the San Benito RHNA, refer to SBtCOG's RHNA Plan.) Based on the RHNA Plan each jurisdiction will need to

identify adequate sites to address its RHNA allocations in the four income categories when updating its housing element.

Monterey and Santa Cruz Counties have enough housing capacity to accommodate the RHNA allocations. San Benito County also has the housing capacity to accommodate the RHNA as described in the San Benito RHNA Plan. The allocations do not exceed forecasted growth and can be accommodated through infill and redevelopment. The AMBAG and SBtCOG RHNA Plans are under development and are expected to be consistent with the 2045 MTP/SCS. The 2045 MTP/SCS will be adopted within 18 months of the RHNA planning period and 6th Cycle Housing Element deadline as documented by HCD. This schedule follows the required statutory deadlines.

Meeting GHG Targets

In 2018, CARB set updated targets for lowering GHG in the Monterey Bay region. They call for a three percent reduction, in per capita GHG emissions from passenger vehicles by 2020 (compared with 2005); and a six percent per capita reduction by 2035 through land use and transportation planning.

The 2045 MTP/SCS demonstrates that the Monterey Bay region will meet these targets by focusing housing and employment growth in urbanized areas; protecting sensitive habitat and open space; and investing in a transportation system that provides residents, workers and visitors with transportation options that are more effective and diverse.

In addition, the 2045 MTP/SCS includes economic development strategies to encourage job growth in communities that are currently job poor as well as planning for new housing in communities that are currently job rich help to address the jobs/housing imbalance in the region and reduce vehicle miles traveled. The process to develop the MTP/SCS was based upon modeling these forecasted land use patterns and future transportation networks, along with the use of sustainable development principles that have been standard planning practice in the region for some time, and an extensive public outreach process.

California Environmental Quality Act (CEQA) Streamlining

Provisions in SB 375 include opportunities for streamlining the CEQA process, when certain conditions are met, as an incentive for implementing projects that are consistent with this SCS. Generally, there are two types of projects for which CEQA requirements can be streamlined, once the MPO adopts an MTP/SCS that meet the greenhouse gas targets established by CARB:

- Transit priority projects streamlining
- Residential/mixed use projects streamlining

SB 375 includes specific requirements for the CEQA streamlining. The discussion below provides a general outline of the requirements.

Transit Priority Projects

A Transit Priority Project (TPP) is a project within an Opportunity Area and is eligible for CEQA streamlining if it is:

- Consistent with the SCS;

- Contains at least 50 percent residential use;
- Proposed to be developed at a minimum 20 dwelling units per acre; and
- Located within one half mile of a major transit stop or high quality transit corridor that is included in the MTP.

A “Sustainable Communities Opportunity Area” is an area within one half mile of an existing or planned “high quality transit corridor” or “major stop” that has the potential for transit oriented development including mixed use. High quality transit is service with headways of 15 minutes or less during peak period or rail service. Figure 4-10 depicts the High Quality Transit Areas.

If a project meets these criteria, it may be analyzed under a new environmental document created by SB 375, called the Sustainable Communities Environmental Assessment, or through an EIR for which the content requirements have been reduced. Alternatively, a TPP can be considered a Sustainable Communities Project and be eligible for a new full CEQA exemption if it further meets the additional requirements beyond the base criteria.

Residential/Mixed Use Projects Consistent with the SCS

Residential and mixed use projects that are consistent with the SCS qualify for streamlined CEQA review if at least 75 percent of the total building square footage consists of residential use or if the project is a Transit Priority Project (TPP). If a project meets these requirements and is consistent with the use designation, density, building intensity and applicable policy of the SCS, any environmental review conducted will not be required to discuss:

- Growth inducing impacts;
- Any project-specific or cumulative impacts from cars and light duty truck trips generated by the project upon its completion on climate change or the regional transportation network; or
- A reduced density alternative.

It is not known how many projects in the Monterey Bay Area would meet the criteria to qualify for the CEQA exemption or streamlining. Lead agencies (including local jurisdictions) maintain the discretion and will be solely responsible for determining consistency of any future project with the SCS.

Implementation Strategies

The 2045 MTP/SCS is first and foremost a transportation plan. However, the transportation network in the 2045 MTP/SCS and the growth patterns envisioned must complement each other. Integration of transportation and land use is essential for improved mobility and access to transportation options.

To encourage implementation of the SCS, SB375 provides CEQA incentives for development projects that are consistent with the regional SCS and help meet greenhouse gas emission targets. Lead agencies (including local jurisdictions) maintain the discretion and will be solely responsible for determining consistency of any future project with the SCS. Cities and counties maintain their existing authority over local planning and land use decisions.

In addition, to achieve the goals of the 2045 MTP/SCS, public agencies at all levels of government may implement a wide range of strategies. Table 4-1 list specific strategies that AMBAG, RTPAs, local jurisdictions, and other stakeholders may consider in order to successfully implement the SCS.

Table 4-1: Implementation Strategies

Strategy	Responsible Party
Economic Development	
Encourage infill housing by working with local jurisdictions to update municipal policies, such as reduced fees tax credits or exemptions, graduated density bonuses, and reduced parking requirements for redevelopment, affordable housing, or mixed use in Opportunity Areas.	AMBAG; local jurisdictions
Create a taskforce to understand and address the economic development and transportation needs of rural areas. The following topic areas are suggested areas to be further explored by the task force: 1) Land Use and Conservation: policies and plans that shape rural areas; 2) The Infrastructure of Agriculture: transportation challenges to the production process; 3) Economic Opportunities: new ways to grow revenue and support better access to jobs; 4) Forest Management: building up economic and environmental value; and 5) Regulations: navigating federal and state environmental guidelines. Once the task force is convened the scope, responsibilities, and role of the group will be further defined.	AMBAG; economic development agencies and non-profits; local jurisdictions
Conduct research on economic sectors in the region to identify and understand high value industry sectors and “clusters” and work with other public agencies and private entities to provide policy and regulatory support for those sectors.	AMBAG; economic development agencies and non-profits; local jurisdictions
Compile and coordinate research and development that supports the green economy which can then be used to attract small, private business that would not otherwise be able to afford extensive research and development costs.	AMBAG; economic development agencies and non-profits
Provide a forum to coordinate the various economic development efforts by both the private and public sector throughout the region in order to maximize desirable economic development on a regional level.	AMBAG; economic development agencies and non-profits
Research ways to encourage vocational training facilities to educate the existing workforce for middle income jobs as well as leverage existing educational institutions to attract more middle income jobs.	AMBAG; local jurisdictions
Work with the Planning Directors Forum to further define and evaluate Opportunity Areas as areas for transit oriented development, as well as educate jurisdictions on the definition of transit priority project (TPP) areas per SB 375 to take advantage of CEQA streamlining benefits.	AMBAG; local jurisdictions

Table 4-1: Implementation Strategies (continued)

Strategy	Responsible Party
Economic Development	
Stay abreast of new local initiatives, such as economic development plans, in order to more fully integrate transportation planning efforts with economic development issues and opportunities in urban and rural areas.	AMBAG
Support the reduction of impact fees and costs to developers for projects that will result in a net increase of jobs within enterprise zones or areas with a low job-housing ratio. Explore the economic impact of implementing an impact fee program that would incorporate multimodal projects and reductions for infill in parts of the region that do not currently have one.	AMBAG; RTPAs
Land Use & Housing	
Prioritize corridor investment projects along high quality transit corridors that serve multiple modes of travel in the development of the Metropolitan Transportation Plan and Regional Transportation Plans. Supportive investments include enhancements for high quality transit, technology development, bicycle and pedestrian improvements and safer intersections.	AMBAG; local jurisdictions
Support mitigation efforts that reduce the impact transportation and land use projects have on open space and farmland by providing readily available data on natural resources and prime farmland to public agencies, exploring a mitigation bank program and participating in resource management planning activities.	AMBAG; RTPAs
Continue to work with local jurisdictions on long range land use planning by refining the land use typologies for the region and better defining opportunity areas.	AMBAG; local jurisdictions
Prioritize projects for funding that are consistent with the Sustainable Communities Strategy goals and/or that have complete streets elements per the adopted Sustainable Communities Strategy and Regional Complete Streets Guidelines in order to encourage use of active transportation options for short trips and improve quality of life	RTPAs; local jurisdictions
Investment in safe bicycle and pedestrian routes that improve connectivity and access to common destinations, such as connections between residential areas and schools, employment centers, neighborhood shopping, and transit stops and stations, supporting efforts throughout the region to improve connectivity and realize public health benefits from these investments.	RTPAs; local jurisdictions
Develop and offer technical resources to support cities and the county with updating their general plans to accommodate housing growth.	AMBAG

Table 4-1: Implementation Strategies (continued)

Strategy	Responsible Party
Land Use & Housing	
Provide transportation infrastructure and planning grants in areas with access to transit.	AMBAG; RTPAs
Create a collaborative forum for sharing resources, successful strategies, and best practices.	AMBAG; RTPAs
Compete for state grants to encourage sustainable land use practices.	AMBAG; RTPAs; local jurisdictions
Develop technical resources for local jurisdictions to understand transit priority areas, opportunity areas, and other areas for priority development.	AMBAG
Meet state requirements to complete the Regional Housing Needs Assessment by quantifying existing and future housing needs resulting from population, employment, and household growth.	AMBAG
Legislative	
Work with State and Federal agencies to provide new and reformed transportation funding methods and sources to implement the Sustainable Communities Strategy that are stable, predictable, flexible, adjustable and adequate in the whole to operate and expand the system.	AMBAG; RTPAs
Support the following legislative agenda: 1) Reinstate tax increment financing and redevelopment for areas identified as Sustainable Communities Investment Areas; 2) Collaborate with other mid to small size regions to ensure that reporting and performance measure requirements do not exceed reasonably available staffing and financial resources; and 3) work with legislatures to reduce the voter threshold from two-thirds to 55 percent for passing transportation related tax measures.	AMBAG; RTPAs
Environment	
Develop technical resources to support regionally consistent climate action planning.	AMBAG
Provide templates and facilitate coordination among jurisdictions to enhance CAP implementation activities.	AMBAG
Explore opportunities to advance local CAP implementation through regional programs.	AMBAG; local jurisdictions
Develop a climate action data portal to help jurisdictions with Climate Action Plan monitoring.	AMBAG; local jurisdictions

Table 4-1: Implementation Strategies (continued)

Strategy	Responsible Party
Environment	
Consider climate change in all functions of government and across public and private sectors.	AMBAG; RTPAs; transit agencies; local jurisdictions
Partner with vulnerable populations to increase equity and resilience through investments, planning, research, and education.	AMBAG; RTPAs; local jurisdictions
Support continued climate research and data tools.	AMBAG; RTPAs; local jurisdictions
Identify significant and sustainable funding sources to reduce climate risks, minimize harm to people, and increase spending for disaster relief.	AMBAG; RTPAs; local jurisdictions
Maximize the use of natural lands, such as wetlands at the coast and agricultural and conservation lands, to help absorb the impacts of climate change. Wetlands can be natural buffers against rising seas and destructive storm surges. Agricultural and conservation lands, often in more rural communities, can serve as natural fire breaks against increased wildfires. Protected natural lands can also help absorb greenhouse gas emissions while providing many other societal benefits.	AMBAG; RTPAs; local jurisdictions
Promote collaboration among federal, local, state and regional government partners and across sectors to help communities better adapt to the impacts of climate change.	AMBAG; RTPAs; local jurisdictions
Assess the vulnerability of critical infrastructure to the impacts of climate change.	AMBAG; RTPAs; local jurisdictions
Analyze the benefits of open space conservation and land-management activities, including carbon sequestration, species preservation, and habitat connectivity.	AMBAG
Technical Assistance/Education	
Continue to improve the Bicycle Model tool and LiveMaps as well as make available other data products that will help to assist local jurisdictions in the development of bicycle networks that have better connectivity and meet the origin and destination needs of the community	AMBAG
Continue to provide forums for regional dialogue regarding local plans and projects so that localities can leverage each other's work for more coordinated regional planning efforts.	AMBAG; RTPAs

Table 4-1: Implementation Strategies (continued)

Strategy	Responsible Party
Technical Assistance/Education	
Keep apprised of federal and state program funding cycles and specific funding opportunities, advise local agencies about them in a timely way, and help to zero in on projects that fit program requirements and are far enough along in delivery to maximize chances for success at bringing federal or state discretionary funds into the region	AMBAG; RTPAs
Seek grant funding to develop a regional economic modeling tool that helps to identify and address the reasons for the jobs/housing imbalance in the region as well as simulate the effects of various kinds of economic development.	AMBAG
Educate and provide resource material to local jurisdiction elected officials and the public about the economic benefits of sustainable development to both the public and private sector.	AMBAG; local jurisdictions; RTPAs
Provide grant technical support as well as letters of support to jurisdictions and public agencies looking to implement projects that are consistent with the Sustainable Communities Strategy.	AMBAG
Work with the Office of Planning and Research (OPR) to educate local jurisdictions about new CEQA options and analysis requirements including streamlining in SB 375, SB 743, and potential future legislation that includes CEQA incentives.	OPR; AMBAG; local jurisdictions
Increase public perception of the value, benefits, and use of transit, vanpool, and rideshare services, via activities such as the 511 website, image and product-specific advertising, promotion of new and restructured services, the guaranteed ride home program, outreach for special events, and education for those unfamiliar with alternative modes, including transit services and bicycle facilities, with both access and safety education.	RTPAs; transit agencies
Transportation	
Facilitate local jurisdiction adoption and implementation of a complete streets policy by recommending adoption of the region's guidelines. Encourage local jurisdictions to implement design principles consistent with the regional complete streets guidelines whenever completing local streets and road projects. Initiate a technical assistance program to help local agencies develop street designs or implement complete streets that are sensitive to their surroundings and context.	AMBAG; RTPAs; local jurisdictions

Table 4-1: Implementation Strategies (continued)

Strategy	Responsible Party
Transportation	
Encourage and support Caltrans in seeking traffic management and safety improvements along with highway rehabilitation projects from the State Highway Operations and Protection Program. Ensure that both urban and rural needs are targeted.	AMBAG; RTPAs; CalTrans
Improve safety and security at crosswalks, transit stops and along main access routes to transit, including rural areas, with higher priority for low income, minority and high crime areas.	RTPAs; local jurisdictions
Collaborate with jurisdictions and employers to provide local community shuttles or circulators that serve transit oriented development, high quality transit stops and neighborhood commercial centers providing an incentive for residents and employees to make trips on transit.	AMBAG; local jurisdictions; large regional employers;
Continue to identify and promote projects that transition freight from trucks to rail, such as an intermodal station in the Salinas Valley.	AMBAG and TAMC in coordination with regional freight stakeholders
Continue to study the impacts of freight and goods movements on major arterials and corridors and support projects that increase freight mobility through and within the region.	AMBAG
Continue to plan for and provide infrastructure for electric vehicles using the region's PEV Readiness Plan, while also planning for and considering evolving transport methods from driverless cars to informal ridesharing networks.	AMBAG
Continue to seek funding to support the regional vanpool program and market vanpooling throughout the region.	AMBAG
Continue the region's commitment to transportation demand management programs as a strategy for safety education and promotion of alternative travel modes for all types of trips. Market transportation demand management strategies towards tourists so that once people arrive to the Monterey Bay Area they have resources to get out of their cars.	RTPAs
Support work-based programs that encourage emission reduction strategies and incentivize active transportation commuting or ride-sharing modes.	AMBAG; RTPAs
Work with Caltrans to incorporate multimodal design into highway projects such that transit can be accommodated on the highway and pedestrian and bicyclists connectivity is enhanced for access over the highway.	RTPAs; CalTrans; transit agencies; local jurisdictions

Table 4-1: Implementation Strategies (continued)

Strategy	Responsible Party
Transportation	
Increase rural and low income minority communities' transportation mobility by supporting greater coordination of rural transportation services, providing solutions to bridge the distance between trip origins or destinations and transit, as well as developing cost-effective programs that attract more riders, including expanded rural vanpools and increased local transit service.	AMBAG; RTPAs; transit agencies
Support projects that improve mobility and accessibility for seniors and people with disabilities.	AMBAG; RTPAs; transit agencies
Encourage the use of traffic operational strategies and intelligent transportation systems to improve traffic flow that will provide lower-cost alternatives to road expansion.	AMBAG; RTPAs; local jurisdictions
Work with local cities, as well as regional, state and national organizations to find alternative funding sources for improving access to open space including national parks in the region.	AMBAG; RTPAs; local jurisdictions
Work with the Regional Storm Water Program staff to learn more about new post-construction storm water management requirements and incorporate best practices for storm water management into project design and future regional planning efforts	AMBAG; Regional Storm Water Management Program; RTPAs; local jurisdictions
Work with the Monterey Airport staff and partner agencies to secure funding to update the Airports Economic Impact Study.	AMBAG; RTPAs; local jurisdictions
Provide training opportunities for local jurisdictions on transportation system management strategies and collaborate with local jurisdictions to update the intelligent transportation systems architecture.	FHWA; AMBAG
Coordinate with Central Coast Community Energy and Monterey Bay Air Resources District to provide programs that install charging stations for workplaces, multi-unit dwelling communities, and medium- and heavy duty vehicles throughout the region	AMBAG; RTPAs; local jurisdictions
Monitor the region's EV efforts, including the number of charging stations, greenhouse gas reductions, energy use, air quality and pollution impacts, and EV-ready cities.	AMBAG; MBARD; local jurisdictions

Table 4-1: Implementation Strategies (continued)

Strategy	Responsible Party
Transportation	
Support the inclusion of EVs in local Climate Action Plans.	AMBAG; RTPAs; local jurisdictions
Support commuters, regional employers, and local jurisdictions by providing programs and services that promote sustainable commute options and incentives, supporting the development of local TDM policies, and helping develop and implement programs that serve commuters.	AMBAG; RTPAs
Consider a regional TDM policy that would require large businesses to implement their own TDM plans. These plans would identify strategies to reduce the number of employees who drive alone to work.	RTPAs
Work with our transportation partners on the design and implementation of pilot projects and collaborative partnerships that promote alternatives to driving alone through innovative mobility solutions. Potential projects could expand beyond traditional TDM strategies to integrate strategies such as shared streets, shared mobility services, technology-based solutions, and more.	AMBAG; RTPAs; transit agencies
Develop and maintain a flexible, adaptable approach to working with the private sector so that solutions launch quickly while still complying with regional, state, and federal laws, regulations, and policies.	AMBAG; RTPAs; transit agencies
Work with regional transportation system operators to develop and maintain a set of common data standards that will allow systems, including planners and policymakers, to share data with one another while protecting security and privacy.	AMBAG; Caltrans; RTPAs; transit agencies

5 Outcomes



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Introduction

The investments identified in the 2045 MTP/SCS are expected to result in significant benefits to the region, not only with respect to transportation and mobility, but also economic activity, air quality, safety, and social equity. This chapter describes the benefits and outcomes projected to result from the implementation of the 2045 MTP/SCS with respect to the adopted regional performance measures. This chapter also describes how the 2045 MTP/SCS addresses the statutory requirements regarding SB 375 and social equity.

As with many areas across the country, inequities created at all levels of government in the past have left a lasting impression on communities today. In developing and implementing the 2045 MTP/SCS, AMBAG has a responsibility to listen to the communities we serve, prioritize equitable solutions in the transportation system, and analyze the burdens and benefits of this system for historically underserved communities.

In the 2045 MTP/SCS, historically marginalized communities include people with low incomes, seniors, people with disabilities, and communities of color. Coordination with various community-based organizations throughout the planning process has resulted in a Plan that can guide our region toward a more inclusive and equitable future.

Performance Outcomes

This section summarizes how well the 2045 MTP/SCS performs. Table 5-1 lists the outcomes of performance measures forecasted using both the AMBAG Regional Travel Demand Model (RTDM) and Geographic Information Systems (GIS). While this chapter includes summaries of the performance improvements expected from the implementation of the 2045 MTP/SCS, more detail is provided in Appendix G.

In the discussion of performance and outcomes, three scenarios are referenced: Existing, No Build, and Plan. The 2015 Existing represents existing conditions and includes only existing transit service and the existing transportation network in 2015. The 2045 No Build assumes current land use trends and represents a future in which only committed programs and projects are implemented. Committed programs and projects are those which are programmed in the 2020 Metropolitan Transportation Improvement Program (MTIP) that have received environmental clearance. The Plan refers to future conditions in which the 2045 MTP/SCS land use patterns and transportation investments are realized. The specific projects associated with the Plan are identified in Appendix C.

Access and Mobility

Accessibility is used to capture how well the transportation system performs in providing people access to various destinations. Destinations can include anything from jobs, education, medical care, recreation, shopping, or another activity that is essential to one's daily needs or helps to improve quality of life. In the 2045 MTP/SCS, accessibility performance measures consider the distribution of trips by mode and travel time.

Commute Travel Time

Compared to Existing and No Build, average commute travel time will remain nearly the same with the improvements included in the 2045 MTP/SCS, despite an additional 114,000 people living in the region.

Work Trips Within 30 Minutes

Compared to existing, the percentage of transit work trips that can be made in 30 minutes improves in the 2045 MTP/SCS. Drive alone and carpool work trips maintain a high level of performance with more than 84 percent of the trips capable of being made within 30 minutes. Sixty-one percent of transit will also be within 30 minutes.

Table 5-1: Performance Measures

Regional Performance Measures	2015 Existing	2045 No Build	2045 MTP/SCS
Access and Mobility			
Work Trips Within 30 Minutes (percentage)			
Drive Alone	85.1%	84.8%	84.3%
Carpool	85.1%	84.8%	84.3%
Transit	58.1%	59.5%	60.8%
Population Within 30 Minutes of Parks (percentage)			
Drive Alone	98.3%	98.4%	98.4%
Bike	97.5%	97.7%	97.7%
Walk	90.1%	90.3%	90.3%
Population Within 30 Minutes of Healthcare (percentage)			
Drive Alone	97.7%	97.9%	97.9%
Bike	90.7%	90.3%	90.3%
Walk	70.0%	67.3%	67.3%
Daily Vehicle Delay Per Capita (minutes)	3.36	6.96	6.13
Commute Travel Time (minutes)	15.3	15.5	15.6
Economic Vitality			
Population Near High Quality Transit (percentage)	15.3%	14.7%	30.0%
Jobs Near High Quality Transit (percentage)	12.0%	11.8%	24.8%
Daily Truck Delay (hours)	3,772	9,611	8,218
Environment			
GHG Reductions (Percent reduction from 2005 baseline) ¹	N/A	N/A	N/A
Open Space Consumed (acres) ^{2,3}	N/A	N/A	293
Farmland Converted (acres) ^{2,3,4}	N/A	N/A	2,635
Healthy Communities			
Growth in Opportunity Areas (percentage)			
Monterey County	N/A	32.9%	32.3%
San Benito County	N/A	21.8%	21.8%
Santa Cruz County	N/A	7.0%	7.0%
Alternative Transportation Trips (percentage)	15.06%	14.60%	14.74%
Population Near Bike Facilities (percentage)	N/A	N/A	86.9
Jobs Near Bike Facilities (percentage)	N/A	N/A	90.5
Peak Period Congested Vehicle Miles of Travel (miles)	552,221	875,310	797,962

Table 5-1: Performance Measures (continued)

Regional Performance Measures	2015	2045	2045
	Existing	No Build	MTP/SCS
Social Equity			
Distribution of MTP/SCS Investments (percentage) ⁵			
Low income population	N/A	N/A	81.7%
Non low income population	N/A	N/A	83.6%
Minority population	N/A	N/A	89.6%
Non minority population	N/A	N/A	87.2%
Low mobility (zero car households and aged populations)	N/A	N/A	71.5%
Low community engagement (linguistic isolation and education attainment)	N/A	N/A	67.9%
Access to Transit within 1/2 mile (percentage) ⁶			
Low income population	9.9%	9.9%	14.4%
Non low income population	2.3%	2.3%	6.9%
Minority population	16.7%	16.8%	19.9%
Non minority population	0.7%	0.7%	8.1%
Low mobility (zero car households and aged populations)	0.6%	0.6%	1.6%
Low community engagement (linguistic isolation and education attainment)	1.2%	1.3%	1.4%
System Preservation and Safety			
Maintain the Transportation System (percentage)	N/A	N/A	62.6%
Fatalities and Injuries per 1,000 VMT	0.02	0.06	0.06
Annual Projected Bike/Pedestrian Fatalities and Injuries per 1,000 VMT	0.005	0.004	0.004

¹Greenhouses gas reductions in 2020 are -3.0 percent per capita and -6.3 percent per capita from 2005 levels.

²Rail projects are not reflected in the 2020, 2035 and 2045 MTP/SCS regionally significant project analysis, as rail lines are existing.

³2045 No Build scenario has increased open space due to farmland conversion per the 2045 MTP/SCS typology as identified by the city and county jurisdictions in SOI's.

⁴Farmland analyzed is Prime, Unique, or Farmland of Statewide Importance as defined by Dept. of Conservation FMMP.

⁵Calculated based upon criteria on total investment of all modelable projects within 1/2 mile of U.S. Census Bureau defined tracts.

⁶Tracts defined per U.S. Census Bureau. Calculated based per criteria on total acreage and percentage of population within a 1/2 mile of transit.

Source: AMBAG Regional Travel Demand Model and Geographic Information Systems. For more information on methodology see Appendix G.

Daily Vehicle Delay Per Capita

Compared to Existing and No Build, daily vehicle delay per capita will remain nearly the same with the improvements included in the 2045 MTP/SCS.

Population Within 30 Minutes of Parks

Compared to Existing and No Build, the percentage of the region's population living within 30 minutes of a park will remain nearly the same in the 2045 MTP/SCS. More than 90 percent of the region's population are able to make a trip to the park within 30 minutes, whether biking, walking, or driving.

Population Within 30 Minutes of Healthcare

Compared to Existing and No Build, the percentage of the region's population that are capable of making a trip from home to a healthcare facility within 30 minutes will remain nearly the same, with the 2045 MTP/SCS improvements.



Economic Vitality

In order to measure the economic vitality of the region, performance measures related to proximity of jobs from transit as well as truck traffic were examined. By providing better access to jobs the region's economy can continue to grow. Additionally, a measure looking at truck traffic was considered imperative given the importance of goods movement to the regional economy.

Jobs Near High Quality Transit

In 2045, nearly 25 percent of the region's jobs are within one-half mile of a high quality transit stop, compared to only 12 percent in the base year and nearly 12 percent in the No Build scenario.

Population Near High Quality Transit

In 2045, 30 percent of the region's population are within one-half mile of a high quality transit stop, compared to only 15 percent in the base year.

Daily Truck Delay

This measure estimates the daily truck hours of delay. The 2045 MTP/SCS includes investments in a regional freight corridor and other improvements to facilitate goods movement. The Plan is estimated to reduce truck delay by more than 14 percent over No Build. However, the truck delay under the Plan will still be above existing levels.



Environment

There are many aspects of the 2045 MTP/SCS that are geared towards improving the environment. However, the performance measures categorized as environmental here are those that have a major effect on the physical surroundings.

Greenhouse Gas Reductions

The targets agreed upon by AMBAG and the California Air Resources Board (CARB) for greenhouse gas reductions are a three percent per capita reduction from 2005 levels by 2020 and a six percent per capita reduction from 2005 levels by 2035. The Plan meets the target in both years achieving three percent reduction in 2020, and a six percent reduction in 2035.

Open Space Conservation

This performance measure shows the total acreage of open space consumed by development. In that regard it considers impacts to sensitive habitat only as it pertains to destruction of that habitat for development. The performance measures do not include a separate analysis for sensitive habitat, however a detailed discussion of the impacts to sensitive habitat can be found in the Environmental Impact Report. The Plan assumes the amount of open space that would be consumed due to land use development and transportation investments is 293 acres.

Farmland Preservation

This performance measure shows the total acreage of farmland consumed by development. The 2045 MTP/SCS shows that 2,635 acres of farmland would be consumed. All of the farmland being consumed in the Plan is within existing spheres of influence or is within Community Plan Areas as designated by the General Plans in the region.

Healthy Communities

More and more government organizations are adopting a health in all policies approach to policy and planning. The transportation system and land use patterns in this region have the potential to substantially impact the health and wellbeing of its residents. Specifically, alternative transportation trips have the potential to: increase a person's daily physical activity therefore having a lasting positive effect on health; improve air quality which directly effects people's lungs and physical wellbeing; and reduce congestion which can decrease the amount of exposure to poor air and noise pollution.

Growth in Opportunity Areas

This performance measure evaluates the percentage of the region's population growth increase within the region's opportunity areas. Each county's population within opportunity areas remains nearly the same with implementation of the 2045 MTP/SCS, compared to the No Build. Monterey County's growth in opportunity areas are over 32 percent of the population. San Benito County's growth in opportunity areas are nearly 22 percent. Santa Cruz County's growth in opportunity areas are 7 percent.

Alternative Transportation Trips

This performance measure evaluates the percent of trips made using transit, shared ride, bicycle or pedestrian modes. The Plan shows a slight increase in the total percent of trips taken using an alternative mode, compared to the No Build scenario. However, it is difficult to capture the full benefits of active transportation investments in current travel demand models as available data on these types of modes is more limited than data on vehicle trips. The benefit of investing in alternative transportation modes is likely far greater than models are able to capture.



Population Near Bike Facilities

This performance measure evaluates the percentage of the region's population living within one-half mile of a bicycle facility. The 2045 MTP/SCS shows nearly 87 percent of the region's population live within one-half mile of a bike facility.

Jobs Near Bike Facilities

This performance measure evaluates the percentage of the region's population employed within one-half mile of a bicycle facility. The 2045 MTP/SCS shows over 90 percent of the region's population are able to reach a bike facility within one-half mile of their place of employment.

Peak Period Congested Vehicle Miles of Travel

The congested vehicle miles traveled in the region is improved in the Plan over the No Build scenario, however it still increases over 2015 existing levels. As population increases so will congested VMT increase. The Plan does improve the projected congested VMT over No Build.

Social Equity

In this document social equity refers to the equitable distribution of transportation impacts (benefits, disadvantages and costs) regardless of income status or race and ethnicity. Social equity performance measures compare low income and minority populations against non-low income and minority populations to ensure that there is an equitable distribution of benefits and not a disproportionate share of burdens. The low income and minority areas are shown in Figure 5-1. The low mobility and low community engagement areas are shown in Figure 5-2. For more information on identification of these populations refer to Appendix G.

- *Low Income Areas:* any Census tract in which 33 percent or more of residing families in an area earned less than 200% of the federal poverty level annually.
- *Non Low Income Areas:* any Census tract in which less than 33 percent of residing families in an area earned less than 200% of the federal poverty level annually.
- *Minority Areas:* any Census tract in which 65 percent or more of the total population residing in an area are non-White.
- *Non Minority Areas:* any Census tract in which less than 65 percent of the total population residing in an area are non-White.
- *Low Mobility:* any Census tract in which 5 percent or less of the households have zero-car ownership, more than 11.35 percent of the population had a disability, and/or 15 percent of the population aged 65 and over had income below the poverty level.
- *Low Community Engagement:* any Census tract in which 15 percent or less of the tract were households where English is not spoken “very well” and/or 15 percent or less of the tract is over the age of 25 without a high school diploma.
- *Low Income Populations:* any Census tract in which 65 percent or more of families are low income, and/or 20 percent or more of the families are living at or below the poverty income threshold.
- *Non Low Income Population:* any Census tract in which less than 65 percent of the families are low income and/or 20 percent or less of the families are living at or below the poverty income threshold.

Distribution of Transportation Investments

The 2045 MTP/SCS includes regional investments in the transportation system across the three counties. The distribution of transportation investments are equal, if not greater, in low income and minority areas compared to other areas.

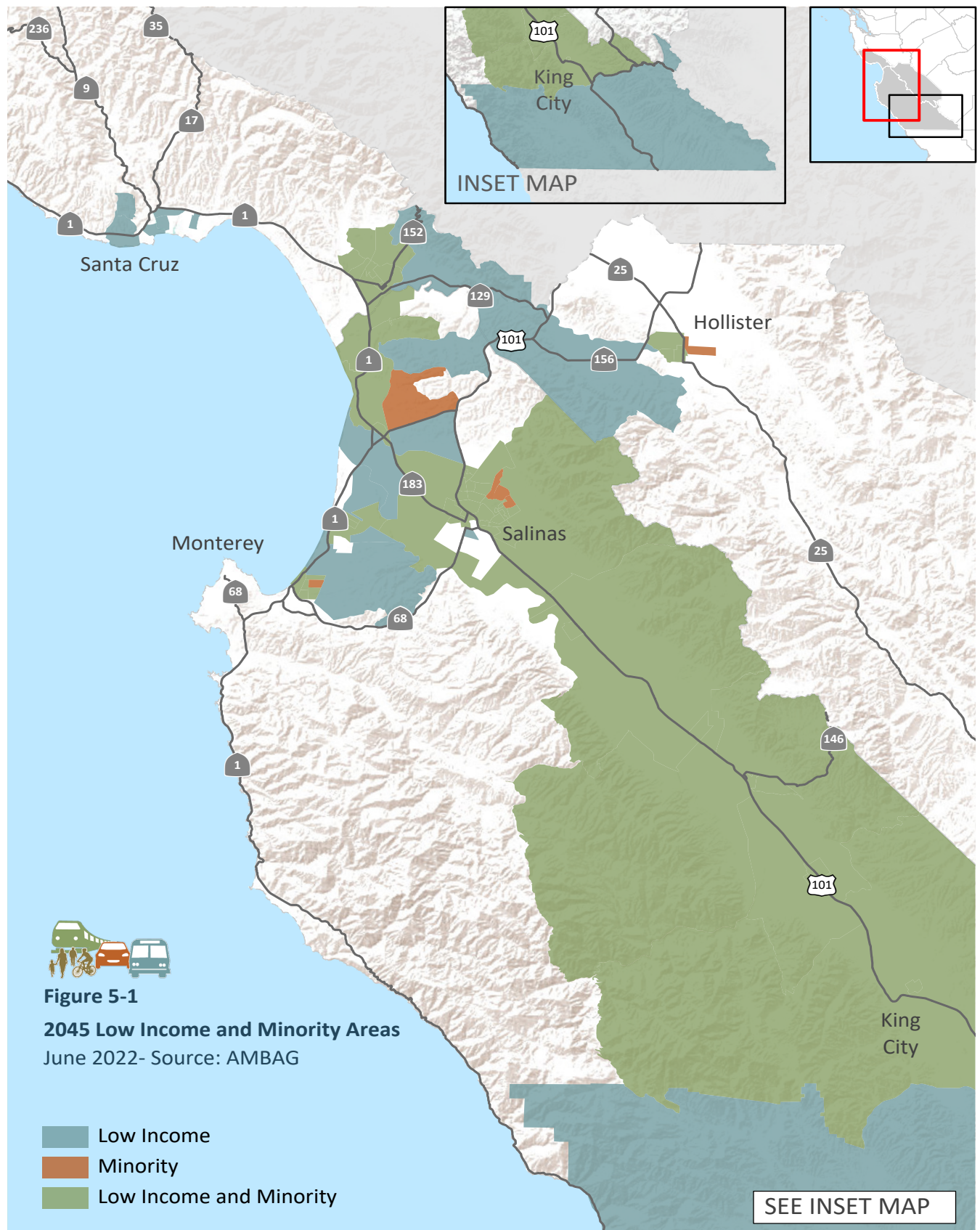
The analysis for low income populations shows that the 2045 MTP/SCS will result in nearly the same distribution of transportation investments for low income populations and non-low income populations.

The analysis also shows that the 2045 MTP/SCS will result in higher investments for minority populations as compared to non-minority populations.

The analysis for low mobility populations shows that the 2045 MTP/SCS will result in nearly 72 percent of

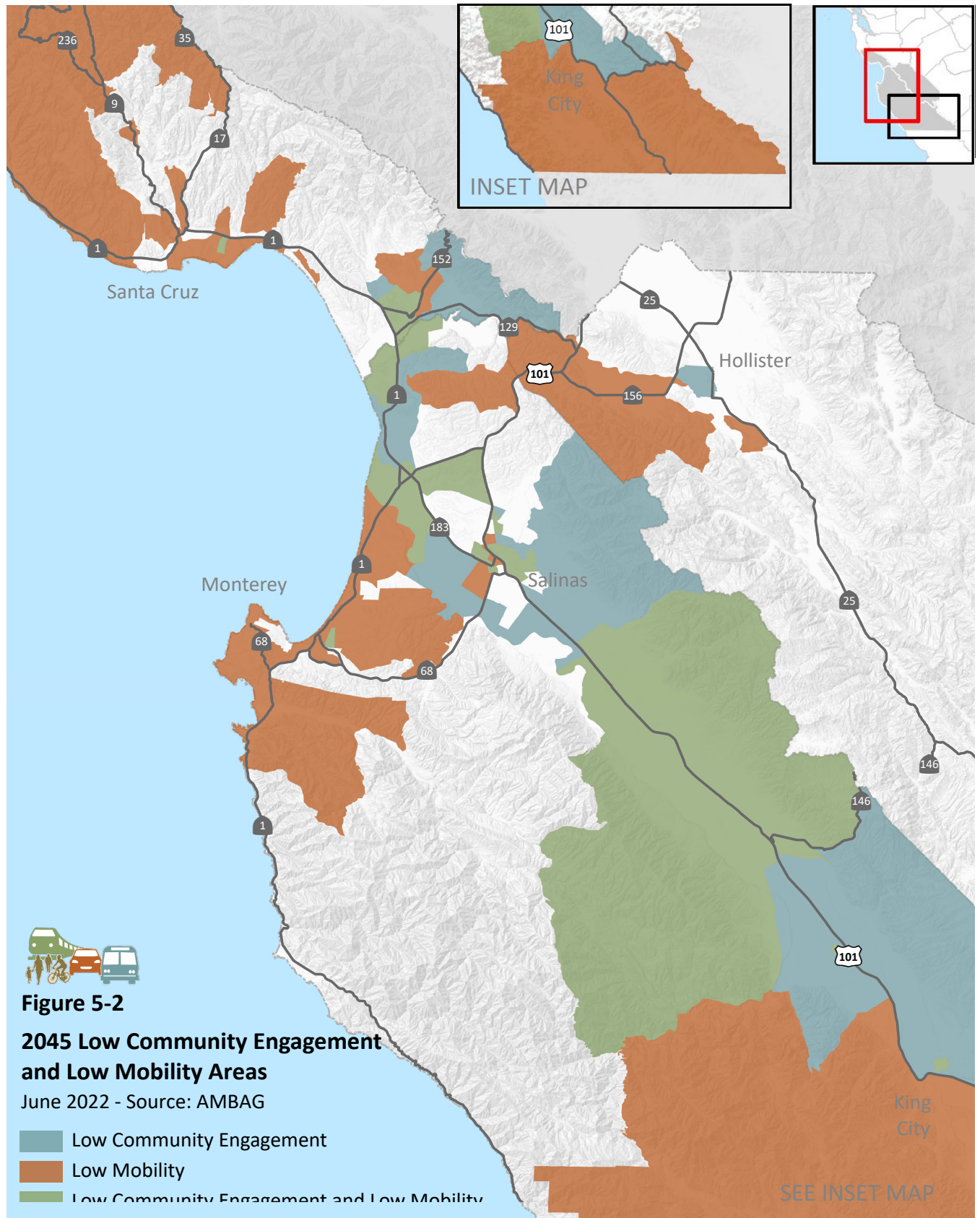
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Figure 5-1: Low Income Minority Areas



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Figure 5-2: Low Community Engagement and Low Mobility Areas



investments distributed to low mobility populations.

The analysis for areas with low community engagement shows that the 2045 MTP/SCS will result in nearly 68 percent of investments distributed to areas with low community engagement.

Equitable Transit Access Within 1/2 Mile

This performance measure evaluates the percent of low income and minority populations that are located within one-half mile of a transit stop. The 2045 MTP/SCS would increase access to transit by nearly five percent for both low income and minority populations. Figure 5-3 highlights transit accessibility of the region.



System Preservation and Safety

One of the ongoing struggles with the region's transportation system is finding the funding needed for preventative maintenance. The cost to maintain the existing transportation system is accelerating as the cost to fix roadways increases exponentially the longer it is deferred. The cost for roadway rehabilitation is six to ten times more expensive than ongoing preventative maintenance. Maintenance is required for the system not only for quality of life for existing users, but also for the safety of those users.

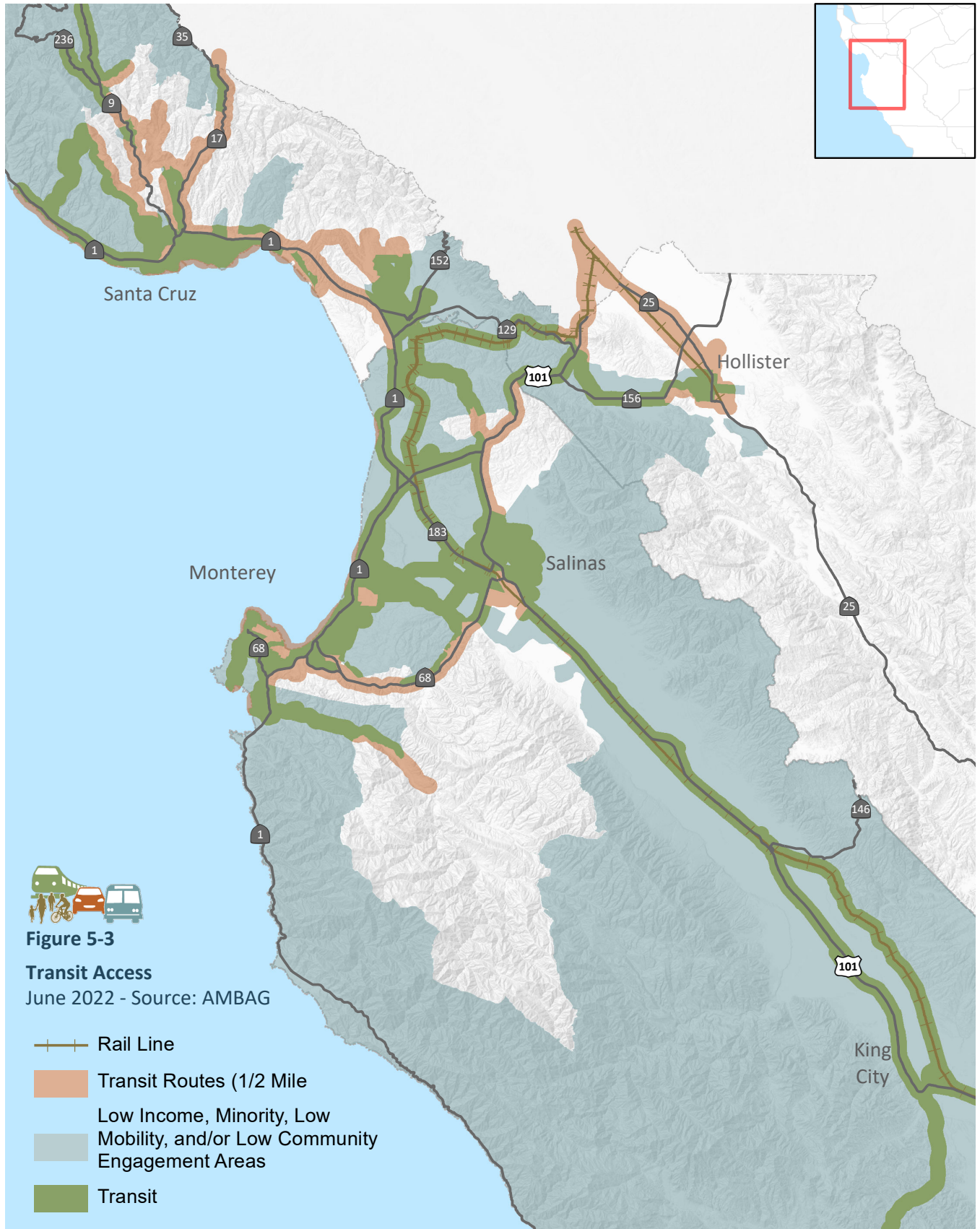
Maintain the Transportation System

The 2045 MTP/SCS dedicates nearly 63 percent of the total funding available for maintenance and rehabilitation projects.

Fatalities and Injuries per 1,000 VMT

This performance measure evaluates the safety of the transportation system by using data on injuries and fatalities to calculate a per capita rate of injury or fatality. Fatalities and injuries are relatively unchanged between 2015 and 2045 staying below a rate of less than 0.1 in 1,000 of injury or fatality per capita. This is a particularly difficult measure to project because it assumes that fatalities and injuries are held constant for every vehicle mile traveled. However, by establishing it as a performance measure in the 2045 MTP/SCS this opens the door for AMBAG to monitor past injuries and fatalities and therefore monitor the effects of the Plan as it is implemented over the course of time.

Figure 5-3: Transit Access



Annual Projected Bike/Pedestrian Fatalities and Injuries per 1,000 VMT

This performance measure evaluates the safety of the transportation system by using data on bicycle and pedestrian injuries and fatalities to calculate a per capita rate of injury or fatality. Bike and pedestrian related fatalities and injuries are nearly the same between 2015 and 2045, however the rate of injury and fatality reduces with the improvement included in the 2045 MTP/SCS.

Focus on Equity

As with many areas across the country, inequities created at all levels of government in the past have left a lasting impression on communities today. Systemic racism has resulted in inequities throughout our region. In developing and implementing the 2045 MTP/SCS, AMBAG has a responsibility to listen to the communities we serve, prioritize equitable solutions in the transportation system, and analyze the burdens and benefits of this system for historically underserved communities.

In the 2045 MTP/SCS, historically marginalized communities include people with low incomes, seniors, people with disabilities, and communities of color. Coordination is key throughout the planning process to result in a Plan that can guide our region toward a more inclusive and equitable future. While the Monterey Bay Area has a long history of working together to create a better, more inclusive region, opportunities exist to continue the work to advance a more equitable and inclusive society.

The Monterey Bay Area is a diverse area with both low and high cost areas. However, in California even “low cost” areas are expensive compared to national averages. According to the H+T index developed by Center for Neighborhood Technology over half of the households in this region spend more than 45 percent of their income on transportation and housing costs combined. If just housing costs are considered without transportation costs, then half of the residents in this region spend over 30 percent of their income on housing costs. The high cost of housing as well as daily goods and services means that many households which are above the federal poverty standards will still struggle to live in this region. In addition, the Plan looks at the effect of these investments on the minority population, which increasingly is the majority of the people living in the region.

Environmental Justice Background

The concept of environmental justice is about equal and fair access to a healthy environment, with the goal of protecting underrepresented and low income communities from incurring disproportionate negative environmental impacts. Consideration of environmental justice in the transportation planning process stems from Title VI of the Civil Rights Act of 1964 (Title VI). Title VI establishes the need for transportation agencies to disclose to the public the benefits and burdens of proposed projects on minority populations. The understanding of civil rights has expanded to include low income communities, as further described below. Title VI states that “No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.” Additionally, Title VI not only bars intentional discrimination, but also unjustified disparate impact discrimination. Disparate impacts result from policies and practices that are neutral on their face (i.e., there is no evidence of intentional discrimination), but have the effect of discrimination on protected groups.

A 1994 Presidential Order (Executive Order 12898) directed every federal agency to make Environmental Justice part of its mission by identifying and addressing the effects of all programs, policies and activities on underrepresented groups and low income populations. Reinforcing Title VI, this Presidential Order ensures that every federally funded project nationwide considers the human environment when undertaking the planning

and decision making process. The Presidential memorandum accompanying E.O. 12898 identified Title VI as one of several federal laws that should be applied “to prevent minority communities and low income communities from being subject to disproportionately high and adverse environmental effects.” Given the overlap in Title VI and environmental justice policies, the term “environmental justice” is used as an inclusive term to mean minority and low income populations. In addition to federal requirements, AMBAG must comply with California Government Code Section 11135, which states that “no person in the State of California shall, on the basis of race, national origin, ethnic group identification, religion, age, sex, sexual orientation, color, or disability, be unlawfully denied full and equal access to the benefits of, or be unlawfully subjected to discrimination under, any program or activity that is conducted, operated, or administered by the state or by any state agency, is funded directly by the state, or receives any financial assistance from the state.”

AMBAG’s Title VI/Environmental Justice Policy and Program

As a government agency that receives federal funding, AMBAG is required to conduct an environmental justice analysis for its MTP. AMBAG’s environmental justice program includes two main elements: technical analysis and public outreach. Specifically, it is AMBAG’s role to ensure that when transportation decisions are made, low income and minority communities have ample opportunity to participate in the decision making process and that they receive an equitable distribution of benefits and not a disproportionate share of burdens. AMBAG adheres to all directives on Environmental Justice.

Under federal policy, all federal agencies must make environmental justice part of their mission and adhere to three fundamental Title VI/environmental justice principles:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low income populations.

AMBAG complies with the framework provided to integrate the principles of environmental justice into the decision making processes.

Technical Analysis

As with the other performance measures presented in this chapter, the comparison of the Plan versus Existing and the No Build is the primary focus of the environmental justice analysis for the 2045 MTP/SCS. The Plan represents the selected strategy to guide the region’s transportation planning over the next two decades, while the No Build represents “business as usual” and assumes current land use trends and the completion of projects programmed in the 2020 MTIP that have received environmental clearance. The data for the analysis is based on the AMBAG RTDM and GIS analysis results. Based on the analysis conducted, the Plan increases transportation investment in low income and minority populations as well as improves access to transit and therefore destination opportunities. Additional information on the performance measures is included in Appendix G.

AMBAG’s Title VI and Environmental Justice Outreach

A key component of the 2045 MTP/SCS development process is seeking public participation. Public input from partner agencies and key stakeholders helped AMBAG prioritize and address needs in the region. As part of the outreach effort, AMBAG compiled a list of key stakeholders to be contacted regarding 2045 MTP/SCS programs

and policies. This list is comprised of a large variety of individuals and organizations ranging from community groups, interest groups, environmental groups, etc. AMBAG maintains this list regularly and allows interested persons to sign up online for the mailing list. The outreach conducted for the SCS to low income and minority groups resulted in the inclusion of increased transit funding in currently underserved areas, the prioritization of vanpooling as a transportation demand management strategy and the emphasis on economic development within the SCS itself.

Transportation Performance Management

The federal government’s Moving Ahead for Progress in the 21st Century Act (MAP-21) established a performance- and outcome-based transportation program. The objective of this program is for states and regions to invest resources in projects that collectively will make progress toward the achievement of the national goals to improve the transportation system. The national goals include safety, infrastructure condition or state of good repair, congestion reduction, transportation system reliability, freight movement and economic vitality, environmental sustainability and reduced project delivery delays.

MAP-21 and the Fixing America’s Surface Transportation (FAST) Act require the U.S. Department of Transportation (DOT), in consultation with states, metropolitan planning organizations (MPOs) and other stakeholders, to establish performance measures in the following areas:

- Fatalities and serious injuries on all public roads including rate of fatalities and serious injuries
- Pavement and bridge condition on the Interstate Highway System and remainder of the National Highway System.
- Travel time reliability, freight travel time reliability, congestion and on-road mobile emissions.

The U.S. DOT issued Final Rules for these performance areas. AMBAG submitted comments on these performance measure rules during the rulemaking process. In consultation with our regional transportation planning partners, AMBAG supports the works with Caltrans to achieve state targets in lieu of setting our own

Table 5-2: Safety Performance Measures

Measure	Data Source	5- Yr. Rolling Average (2021)	Percent Reduction 2018 to 2021
Number of Fatalities	FARS	3624.8	2.9%
Rate of Fatalities (per 100M VMT)	FARS & HPMS	1.0	2.9%
Number of Serious Injuries	SWITRS	15419.4	1.3%
Rate of Serious Injuries (per 100M VMT)	SWITRS & HPMS	4.4	1.3%
Number of Non-Motorized Fatalities and Severe Injuries	FARS & SWITRS	4340.8	2.9%/1.3% Fatalities/ Injuries

regional targets. The Infrastructure Investment and Jobs Act of 2021 (IIJA), continued to identify safety as a national goal area and requires each state to set Safety Performance Management Targets in order to achieve a significant reduction in motorized and non-motorized traffic fatalities and serious injuries on all public roads. The Metropolitan Planning Organizations must also establish targets in coordination with the state. AMBAG also has created a new work element in its Overall Work Program for Transportation Performance Management to support this initiative. The following describes each national performance management measure in detail.

Performance Measure Rule 1 (PM 1): Safety Targets

The FHWA’s Safety Performance Management Measure rule establishes five performance measures to carry out the Highway Safety Improvement Program (HSIP) and requires data reporting of the five-year rolling averages for: (1) number of fatalities, (2) rate of fatalities per 100 million vehicle miles traveled (VMT), (3) number of serious injuries, (4) rate of serious injuries per 100 million VMT and (5) number of non-motorized fatalities and non-motorized serious injuries. Safety performance measures data is currently collected and reported on by state and local law enforcement agencies and is maintained in centralized state and national databases.

Federal regulations require states to set performance targets for improving the transportation system in cooperation with MPOs. The Safety Performance Management final rule became effective on April 14, 2016. Final statewide safety targets were established on August 31, 2017 and will be updated annually as needed. In 2018, AMBAG and our RTPA partners reviewed the statewide targets and agreed to support these targets. On February 14, 2018, the AMBAG Board approved supporting Caltrans statewide safety targets. See Table 5-2 for Safety performance measures and targets. While these targets are to be met at a Statewide level, local projects should strive to contribute towards the achievement of these goals to the extent practicable.

See Appendix G for a regional system performance report on PM 1 safety measures.

State safety targets were accepted by AMBAG in February 2018. Numerous upcoming operational and management strategies to improve safety are found in Chapter 4 and a number of safety related projects are found in Appendix C. These strategies and projects are expected to contribute to the improvement of transportation safety throughout the region.

Performance Measure Rule 2 (PM 2): Bridge and Pavement Performance Targets

The Bridge and Pavement Performance Rule requires the State to collaborate with MPOs to develop performance targets for two areas: (1) pavement condition on the Interstate System and (2) on the non-Interstate National Highway System (NHS) and bridge condition on the NHS. See Table 5-3 for a list of these measures. The state has established performance targets for this management rule. In 2018 AMBAG and our RTPA partners reviewed the statewide targets and agreed to support the state targets. These targets are to be

Table 5-3: System Performance Measures

PM 3 Statewide Targets Applicable to AMBAG Region			
Performance Measure	2017 Baseline Data	2-year Target	4-year Target
Percent of Reliable Person-Miles Traveled on the Non-Interstate NHS	73%	N/A	74%

achieved at the state level with MPOs and RTPAs working in cooperation with the state. See Table 5-3 for bridge and pavement performance measures and targets as of October 2018.

See Appendix G for a regional system performance report on PM 2 safety measures.

Performance Measure Rule 3 (PM 3): System Performance, Freight System, and Congestion Mitigation and Air Quality Performance Targets

The System Performance, Freight System, and Congestion Mitigation and Air Quality Improvement Program Rule requires the State work in cooperation with MPOs to develop performance targets which measure travel reliability for persons and freight, congestion, non-single occupant vehicle travel and emissions reductions. See Table 5-4 for a list of these measures. The state has established performance targets for this management rule. In 2018 AMBAG and our RTPA partners reviewed the statewide targets and agreed to support the state targets. These targets are to be achieved at the state level with MPOs and RTPAs working in cooperation with the state. See Table 5-4 for system, freight, congestion mitigation, and air quality performance measures and targets.

See Appendix G for a regional system performance report on PM 3 safety measures.

6 Public Participation



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Introduction

AMBAG values public participation in the development of the 2045 MTP/SCS. Public involvement is essential to ensure that stakeholders gain a clear understanding of AMBAG, its role as a metropolitan planning organization (MPO), critical elements of the 2045 MTP/SCS, and its development process. Furthermore, public involvement helps AMBAG policymakers and staff better understand the needs and concerns of stakeholders, leading to more meaningful planning.

A critical component in preparing the 2045 MTP/SCS was to provide guidance in the structuring of regional transportation planning processes to ensure that, to the greatest extent possible, interagency consultation and public participation were an integral and continuing part of the regional transportation decision making process. The participation policies and procedures were structured to enable all participants the ability to express their values and interests in the shaping and implementation of regional policies and decisions regarding the transportation system.

Due to the COVID-19 pandemic, engagement with the public throughout the development of the 2045 MTP/SCS was completed both in person and virtually. AMBAG worked diligently to ensure that individuals without devices were engaged through other sources by providing physical materials and technical support when necessary or requested. In the future, AMBAG will continue to engage the public both in person and virtually, even beyond the pandemic, due to the success seen through the MTP/SCS development.

Development of the 2045 MTP/SCS has been a multi-year effort that began in 2019. A comprehensive program of public involvement activities was a key part of the process. Extensive outreach with local government officials was conducted, as well as numerous community workshops and meetings, in addition to telephone and online surveys. AMBAG also maintained a project website where the 2045 MTP/SCS was posted. A detailed description of the outreach activities is included in Appendix D.

Public Participation Plan

In compliance with federal and state requirements and to guide effective public involvement, AMBAG utilizes its Public Participation Plan. The Public Participation Plan provides direction for public participation activities, outlining the processes and strategies AMBAG uses to reach out to a broad range of stakeholders to gain input. AMBAG's Public Participation Plan was updated to incorporate requirements of SB 375. Detailed documentation of the public outreach conducted for the 2045 MTP/SCS is included in Appendix D.

Engaging the Community

AMBAG engaged the community throughout the development of the 2045 MTP/SCS. These activities include:

- Ten community workshops have been held to date
- A project website (<https://www.ambag.org/plans/2045-metropolitan-transportation-plan-sustainable-communities-strategy>)
- Preparation of handout materials, flyers, information sheets, online surveys, frequently asked questions (FAQs), etc.

Each of these activities is described in further detail in subsequent sections of this chapter.



Workshops

Three series of workshops each were held throughout the tri-county region at key milestones. The in person workshops were designed in an open house format with a variety of stations to provide one-on-one discussion and to create a more comfortable and meaningful environment for participants. Virtual workshops were also held during the COVID-19 pandemic. Materials were provided in both English and Spanish and translation services were available at most of the workshops. Each workshop had a series of interactive stations where participants were asked to engage with planners by drawing on maps, asking questions and stating preferences.

The first workshop series was held in January 2020 and was designed to inform participants of regional issues, explain the purpose of this project, and to solicit input on their preferences and priorities, which would help shape the initial set of scenarios. The second workshop series was held virtually in May 2021 and was set up to explain the purpose of the 2045 MTP/SCS and to solicit input on potential SCS strategies such as affordable housing, telework, pricing, transit, economic development, etc.

The third workshop series was held in January 2022 on the Draft 2045 MTP/SCS and the Draft Environmental Impact Report (EIR). The staff held four public workshops/ hearings to receive feedback and public comments on the draft 2045 MTP/SCS and Draft EIR.

Digital Media

In addition to print media AMBAG provided information in a few different digital formats. Data that was collected for the purposes of this project was compiled in the AMBAG Regional Data Viewer system.

GIS Data Portal

AMBAG launched a new GIS Portal leveraging the latest ESRI technology in 2020, replacing our previous GIS Viewer. The GIS Portal allows jurisdictions to log in and edit data for inclusion in our long-range plan and also provides the ability for the public to view geospatial data in a live and interactive format. The Portal hosts spatial data holdings in a standardized, dynamic and accessible format. AMBAG compiled GIS datasets to show transportation project, managing agencies and the types of sensitive environmental or other resources are near projects to help them prepare Environmental Impact Reports (EIRs) and design projects which cause the least impact to these resources. AMBAG staff is also working to incorporate the data captured in GIS Portal into Urban Footprint as a key component in MTP/SCS's public participation process.

Project Website

The project website (<https://www.ambag.org/plans/2045-metropolitan-transportation-plan-sustainable-communities-strategy>) is the central portal for information about the project and upcoming events. The Draft 2045 MTP/SCS and associated Draft Environmental Impact Report are posted to the project website, as will the Final 2045 MTP/SCS and Final Environmental Impact Report upon adoption. The website address was provided on all outreach materials and has been updated regularly to maintain current content.

From the homepage, visitors of the website could access upcoming events, recent news, email sign-up and the AMBAG Facebook page.

Engaging Local Jurisdictions

A variety of committees and boards were consulted throughout the planning process and at key milestones to solicit feedback, provide project updates, and relay community input from the workshops and surveys. These committees and boards are made up of elected officials, staff from local jurisdictions and agencies, local leaders and organizers, and members of the general public.

AMBAG Board of Directors

The AMBAG Board of Directors consists of local elected officials that have been appointed by their respective city council or board of supervisors. Each member city has one representative on the AMBAG Board and each member county has two. There are nine ex-officio members representing each of the three Regional Transportation Planning Agencies, Caltrans District 5, Monterey-Salinas Transit, Santa Cruz Metropolitan Transit District, Monterey Bay Air Resources District, Central Coast Community Energy, and the Monterey Peninsula Airport District.

The AMBAG Board meets monthly and sets policy. Day-to-day oversight is provided by the Executive Director, who is appointed by and serves at the pleasure of the Board of Directors.

The AMBAG Board met once a month throughout the planning process to receive project updates, provide policy direction and select the preferred scenario for the 2045 MTP/SCS.

Planning Directors Forum

The Planning Directors Forum consists of planning directors and staff from the 18 cities, three counties, three regional transportation planning agencies, transit operators, other transportation partners, and AMBAG. The Planning Directors Forum meets regularly to address regional land use and transportation planning issues. The Planning Directors Forum met 13 times throughout the planning process and at key milestones to identify

priorities, review growth projections, assist in scenario development and draft project lists, review draft workshop materials and to receive project updates.

Public Participation Plan

Providing public access to and participation in the planning processes of the Monterey Bay region is a responsibility shared between Caltrans, AMBAG, the Council of San Benito County Governments, the Santa Cruz County Regional Transportation Commission, the Transportation Agency for Monterey County, Monterey-Salinas Transit, San Benito County Local Transportation Authority, and Santa Cruz Metropolitan Transit District. Each partner agency solicits public input from its planning, policy, and programming processes. Various methods are used to engage stakeholders, and provide affected agencies and interested parties with timely information and opportunities to participate in the transportation planning process.

Each federally funded transportation program or project conducted by a partner agency must have a specified public participation process that defines the avenues for reasonable involvement in the metropolitan transportation planning process. AMBAG's process is outlined in the 2015 Public Participation Plan.

The Monterey Bay Area Public Participation Plan was adopted in 2019. The passage of Senate Bill 375 in 2008 resulted in changes in Government Code §65080, which required an update to the Monterey Bay Area Public Participation Plan.

Technical Advisory Committees

The Technical Advisory Committees for each county are made up of staff from local jurisdictions and agencies, including local transit service providers and are managed by staff from the RTPAs. The Technical Advisory Committees review and provide technical guidance and advice on transportation projects and programs within each county, and makes recommendations to the RTPA Boards of Directors. AMBAG staff met with the Technical Advisory Committees frequently, particularly at key milestones throughout the planning process to confirm transportation priorities, projects, and funding sources.

One-on-One Meetings

In addition to coordinating workshops and large meetings to discuss and inform the planning process, AMBAG held more than 80 one-on-one meetings with senior staff from local jurisdictions. Many of these meetings were to discuss the Regional Growth Forecast. However, these meetings were critical to engaging local planners in the overall 2045 MTP/SCS development process as well as for incorporating ongoing local infill development strategies and other land use plans into the regional planning process.

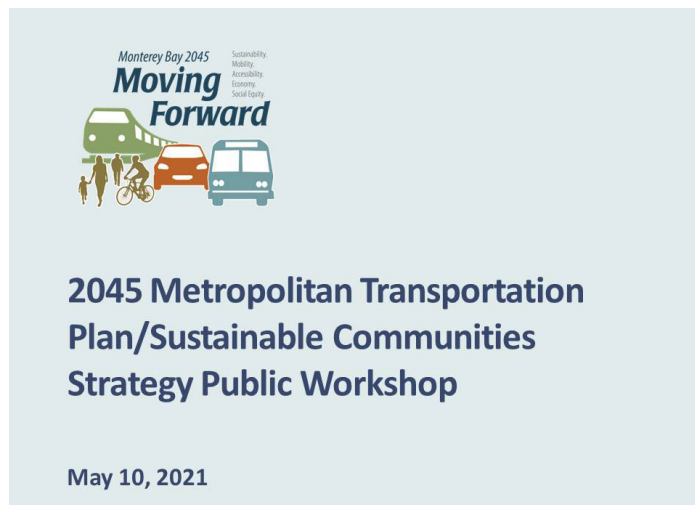
Coordinating with Partner Agencies

The Regional Transportation Planning Agencies - the Transportation Agency for Monterey County, the Santa Cruz County Regional Transportation Commission and the Council of San Benito County Governments- are important partners in the planning process for the 2045 MTP/SCS. Each RTPA develops a separate Regional Transportation Plan for each county in the region that has county specific details for transportation projects. AMBAG works with

the RTPAs to develop project lists, financial assumptions and revenue constrained scenarios during the planning process. AMBAG staff met with the three RTPAs' staff twice a month as part of a working group in order to coordinate development of each of the Regional Transportation Plans with the 2045 MTP/SCS.

AMBAG worked very closely with the RTPAs in the planning process. The RTPAs held meetings beginning in 2019 to obtain input on transportation projects and local community priorities which feed into the development of the 2045 MTP/SCS.

These meetings included presentations to a broad range of community groups, business organizations, chambers of commerce's, city councils, school superintendents, service clubs, trade & professional organizations, educational & medical institutions, taxpayer associations, etc. Additionally, the RTPAs sought public input via surveys, comments, focus groups, stakeholders interviews, websites and social media.



AMBAG consulted with the appropriate State and local representations, including representatives from environmental and economic communities; airports; transit and freight during the preparation of the 2045 MTP/SCS. AMBAG also included federal land management agencies during the preparation of the Plan.

Consultation with Interested Parties

Engaging individual and groups that have an interest in transportation and land use planning decisions are critical to the development of the 2045 MTP/SCS. AMBAG involved private sector interests in the development of the 2045 MTP/SCS. These groups include, but are not limited to: landowners, neighborhood and community groups, environmental advocates, affordable housing advocates, home builder representatives, business organizations, commercial property interests, educational organizations, tourism, trucking and agricultural representatives, etc. Engagement with these groups and other interested parties are pursued through a variety of mechanisms such as direct outreach, advisory committees, meetings, presentations, etc. as statutorily required.

Consultation and Coordination with Resource Agencies

MAP-21 requires that the MTP/SCS environmental mitigation program be developed in consultation with federal, state and tribal land management, wildlife, and regulatory agencies (Title 23 CFR Part 450.322(f)(7)), as well as with state and local agencies responsible for land use, natural resources, environmental protection, conservation and historic preservation (Title 23 CFR Part 450.322(g)). Further, in accordance with Title 23 CFR Part 450.322, the MTP/SCS must provide a discussion of potential environmental mitigation activities

and areas, including those mitigation activities that might maintain or restore the environment that is being affected by the plan. This mitigation discussion must happen in consultation with federal, state and tribal land management, wildlife and regulatory agencies. During the development of the Plan, AMBAG consulted with various land management agencies to refine potential approaches to support the conservation of natural lands and farmlands consistent with State conservation planning initiatives. This consultation ensured policies when combined with land use strategies and transportation investments included in the 2045 MTP/SCS, enable the region to work toward consistency with State conservation planning initiatives. AMBAG's compliance with the California Environmental Quality Act (CEQA) serves as another opportunity to consult with federal, state and local resource agencies and sovereign tribal nations responsible for land use management, natural resources, environmental protection, conservation and historic preservation in the development of the MTP/SCS. This consultation includes other agencies and officials responsible for planning activities in the AMBAG region that are affected by transportation.

As required by CEQA, the Notice of Preparation (NOP) stating that AMBAG as the lead agency would prepare a program-level Environmental Impact Report (EIR) for the 2045 MTP/SCS was the first step in the environmental review process. The NOP gave federal, state and local agencies and the public an early opportunity to identify areas of concern to be addressed in the EIR and to submit them in writing to AMBAG. AMBAG held public scoping workshops in January 2020 to explain the environmental review process and solicit early input on areas of concern. While the MTP is not subject to the federal National Environmental Policy Act (NEPA), AMBAG consulted with federal agencies as appropriate during the preparation of the CEQA environmental document.

Consultation with Native American and Tribal Governments

State and federal regulations require AMBAG to conduct government-to-government consultation regarding MTC's planning and programming activities with tribal governments of federally-recognized Native American tribes. Additionally, effective July 1, 2015, Assembly Bill 52 (Gatto, 2014) began requiring that state and local agencies analyze the impacts to Native American cultural resources under the California Environmental Quality Act (CEQA). The law introduced new state requirements for consultation with Native American tribal governments. As such, lead agencies under CEQA must work with tribal governments to avoid or mitigate the impacts to cultural resources. AMBAG submitted formal notification of a project and consultation opportunity under AB 52 (Gatto, 2014), pursuant to Public Resources Code § 21080.3.1 to all interested parties in the AMBAG region. The AMBAG region does not have any tribal nations or tribal owned land, however, there are tribal cultural sites in the region.

Title VI and Environmental Justice Outreach

The outreach conducted for the 2045 MTP/SCS meets the requirements of Title 23 CFR Part 450.316(a)(1)(vii) in seeking out and considering the needs of those traditionally underserved. Materials were prepared in both English and Spanish and public meetings were held in accessible locations and virtually. Interpretation services were also provided for. More information on the public engagement strategies can be found in AMBAG's Public Participation Plan.

7 Glossary



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Glossary

AASHTO

American Association of State Highway and Transportation Officials – A nonprofit, non-partisan association representing highway and transportation departments in the 50 states, the District of Columbia and Puerto Rico.

AB 32

Assembly Bill 32: Signed into law on September 26, 2006, it requires that the state's global warming emissions be reduced to 1990 levels by 2020. This reduction will be accomplished through an enforceable statewide cap on global warming emissions that will be phased in starting in 2012. In order to effectively implement the cap, AB 32 directs the California Air Resources Board (CARB) to develop appropriate regulations and establish a mandatory reporting system to track and monitor global warming emissions levels.

ADA

Americans with Disabilities Act: The federal civil rights legislation for disabled people that was passed in 1990; it requires public transportation systems to be more fully accessible; includes the provision of paratransit service.

Active Transportation

Active Transportation includes any method of travel that is human-powered, but most commonly refers to walking and bicycling.

ADT

Average Daily Traffic: The average number of vehicles that travel on a given roadway in a 24-hour period on a weekday.

Air Cargo

Revenue producing items in domestic or international air commerce, composed of freight, express, and mail, but excluding passenger baggage.

Air Carrier

An aviation operator that provides regular round-trips per week between two or more points, and publishes flight schedules that specify the times, days of the week, and places between which such flights are performed; or that transports mail by air pursuant to a contract with the U.S. Postal Service.

Alternative Transportation Fuels

Low polluting fuels that are used to propel a vehicle, in place of petroleum-based gasoline or diesel fuels. Examples include biodiesel, electricity, ethanol, propane, compressed natural gas and liquid natural gas.

AMBAG

Association of Monterey Bay Area Governments: AMBAG is responsible for long-range transportation planning and programming under federal and state law.

Amtrak

The National Railroad Passenger Corporation, or Amtrak, is the nation's intercity passenger rail provider. Amtrak operates trains in partnership with 15 states and four commuter rail agencies.

Annual Service Miles

The number of miles that all transit vehicles travel each year in scheduled transit service operations, or when carrying passengers in door-to-door transit service.

Apportionment

A federal budgetary term that refers to a statutorily prescribed division of assigned funds. It is based on formulas prescribed by law.

APS

Alternative Planning Strategy: Senate Bill 375 (SB 375) provides that if the sustainable communities strategy falls short of meeting the regional greenhouse gas reduction targets from passenger vehicles, the region must prepare an "alternative planning strategy" that, if implemented, would meet the targets.

ArcInfo

A geographic information system (GIS) that can be used to maintain, manipulate, and display transportation, land use and demographic data.

Arterial

Streets with traffic lights that serve primarily to carry traffic through an area as quickly and efficiently as possible.

Arterial Management System

A hardware and software system that enables local agencies to coordinate the timing of traffic signals across jurisdictional boundaries; optimize the flow of traffic on regionally significant arterials; manage traffic caused by special events and major accidents; and coordinate arterial signals with freeway ramps, transit service and rail grade-crossings.

ATIS

Advanced Traveler Information Systems: Technology used to provide travelers with information, both pre-trip and in-vehicle, so they can better utilize the transportation system.

ATMS

Advanced Transportation Management Systems: Technology used to improve the operations of the transportation network.

Autonomous Vehicles

Autonomous vehicles (also known as a driverless cars, autos, self-driving cars, robotic cars) are vehicles that are capable of sensing their environment to navigate and operate without human input.

Auxiliary Lane

An additional freeway lane between adjacent interchanges that improves the weaving conflicts between exiting and entering vehicles.

AVL

Automated Vehicle Location: A transportation device that uses the coordinates from earth-orbit satellites to determine the precise location of a vehicle on the earth's surface. AVL is used to manage taxi, bus and commercial vehicle fleet operations.

AVO

Average Vehicle Occupancy: Calculated by dividing the total number of travelers by the total number of vehicles.

Base Year

The year 2015, used in the MTP performance analysis as a reference point for current conditions.

Baseline

Future scenario which includes only those projects that are existing, undergoing right-of-way acquisition or construction, come from the first year of the previous MTP or MTIP, or have completed the NEPA process. The Baseline is based upon the adopted 2020 MTIP.

Bikeway Classifications

As defined by the Manual on Uniform Traffic Control Devices:

- Class I Bike Path: A paved shared-use path within an exclusive right of way
- Class II Bike Lane: Signed and striped lanes within a street right of way
- Class III Bike Route: Preferred routes on existing streets identified by signs
- Shared Lane Marking or "Sharrow:" Provides positional guidance to bicyclists on roadways that are too narrow to be striped with bicycle lanes and to alert motorists of the location a cyclist may occupy in the roadway

BRT

Bus Rapid Transit: Corridor-level services providing fast and frequent transit services that are designed to take advantage of priority treatments in order to serve longer distance regional trip making.

BTA

Bicycle Transportation Account: Provides state funds for city and county projects that improve safety and convenience for bicycle commuters.

CAA

Clean Air Act: Federal legislation that sets national air quality standards and requires each state with areas that have not met federal air quality standards to prepare a State Implementation Plan, or SIP. The 1990 amendments to the CAA, often referred to as the CAAA, established new air quality requirements for the development of metropolitan transportation plans and programs. The California Clean Air Act (CCAA) sets more stringent standards for state air quality.

CAAA

Clean Air Act Amendments of 1990: Federal legislation that established criteria for attaining and maintaining federal air quality standards for allowable concentrations and exposure limits for various air pollutants. The legislation also provides emissions standards for specific vehicles and fuels.

CAFR

Comprehensive Annual Financial Report: Official annual financial report that encompasses all funds and financial components associated with any given organization.

California Transportation Plan 2050

The California Transportation Plan (CTP 2050) provides a long-range policy framework to meet future mobility needs and reduce greenhouse gas emissions. The CTP 2050 defines goals, performance-based policies and strategies to achieve a collective vision for California's future statewide, integrated, multimodal transportation system. The plan envisions a sustainable system that improves mobility and enhances our quality of life.

Caltrans

California Department of Transportation: The state agency responsible for the design, construction, operation, and maintenance of the state highway system. The State system includes interstate freeways and state highways.

CAPTI

Climate Action Plan for Transportation Infrastructure: A framework for aligning state transportation infrastructure investments with state climate, health, and social equity goals, built on the foundation of the "fix-it-first" approach established in SB 1.

CARB

California Air Resources Board: The state agency responsible for adopting state air quality standards, establishing emission standards for new cars sold in the state, overseeing activities of regional and local air pollution control agencies, and setting regional targets for reducing greenhouse gas emissions from passenger vehicles.

Carpool

An arrangement in which two or more people share the use of a privately-owned automobile to travel together to and from pre-arranged destinations — typically between home and work or home and school.

Carsharing

Organized short-term auto rental, often located in downtown areas near public transit stops as well as near residential communities and employment centers. Carsharing organizations operate fleets of rental vehicles that are available for short trips by members who pay a subscription fee, plus a per trip charge.

CCI

Construction Cost Index: A measurement of the inflation rate in the cost of major construction projects.

CEQA

California Environmental Quality Act: State law providing certain environmental protections that apply to all transportation projects funded with state funds.

CFR

Code of Federal Regulations: The codification of the general and permanent rules and regulations (sometimes called administrative law) published in the Federal Register by the executive departments

and agencies of the federal government of the United States.

CHP

California Highway Patrol: The state law enforcement agency responsible for highway safety.

CHSRA

California High Speed Rail Authority: It was created by the California Legislature in 1996 to develop a plan for the construction, operation, and financing of a statewide, intercity high speed passenger rail system.

CIP

Capital Improvement Program: Long-range strategic plan that identifies capital projects; provides a planning schedule and financing options.

Climate Adaptation

Strategic response to global warming and climate change, that seeks to reduce the vulnerability of social and biological systems to relatively sudden change and thus offset the effects of global warming. In 2009, California adopted a statewide Climate Adaptation Strategy (CAS) that summarizes climate change impacts and recommends adaptation strategies across seven sectors: Public Health, Biodiversity and Habitat, Oceans and Coastal Resources, Water, Agriculture, Forestry and Transportation and Energy.

CMP

Congestion Management Program: Required of every county in California with a population of 50,000 or more to qualify for certain state and federal funds. CMPs set performance standards for roads and public transit, and show how local agencies will attempt to meet those standards. The CMP is required to be adopted by the Congestion Management Agency, and it must be consistent with the adopted Metropolitan Transportation Plan (MTP).

CNG

Compressed Natural Gas: A clean-burning alternative fuel for vehicles.

COG

Council of Governments: A voluntary organization of local governments that strives for comprehensive regional planning. AMBAG is the COG for Monterey and Santa Cruz counties. SBtCOG is the COG for San Benito County.

Community Plan

More specific versions of General Plans, generally dealing with smaller geographical areas, but having the same force of law. See General Plan.

Commuter

A person who travels regularly between home and work or school.

Commuter Rail

Conventional rail passenger service within a metropolitan area. Service primarily is in the morning

(home-to-work) and afternoon (work-to-home) travel periods.

Complete Streets

A complete street is a transportation facility that is planned, designed, operated, and maintained to provide safe mobility for all users, including bicyclists, pedestrians, transit vehicles, truckers, and motorists, appropriate to the function and context of the facility.

Constant Dollars

Dollars expended/received in a specific year adjusted for inflation/deflation relative to another time period.

Conformity

A demonstration of whether a federally-supported activity is consistent with the SIP — per Section 176 (c) of the Clean Air Act. Transportation conformity applies to plans, programs, and projects approved or funded by the Federal Highway Administration or the Federal Transit Administration.

Congestion

Congestion is usually defined as travel time or delay in excess of what is normally experienced under free flow traffic conditions. Congestion is typically accompanied by lower speeds, stop-and-go travel conditions, or queuing, such as behind ramp meters or heavily-used intersections.

Corridor

A broad geographical band that follows a general directional flow connecting major trip origins and destinations. A corridor may contain a number of streets, highways, and transit route alignments.

CPI

Consumer Price Index: Developed by the Bureau of Labor Statistics of the U.S. Department of Labor to provide a measurement of the inflation rate in the general economy of a given metropolitan area.

CTC

California Transportation Commission: A state agency that sets state spending priorities for many state and federally funded highway and transit projects and allocates funds to those projects. An eleven member commission, nine members are appointed by the Governor, one by the pro tem of the Senate and one by the Speaker of the Assembly.

CTP

California Transportation Plan: A statewide, long-range transportation policy plan that provides for the movement of people, goods, services, and information. The CTP offers a blueprint to guide future transportation decisions and investments that will ensure California's ability to compete globally, provide safe and effective mobility for all persons, better link transportation and land-use decisions, improve air quality, and reduce petroleum energy consumption.

CVO

Commercial Vehicle Operations: Management of commercial vehicle activities through ITS.

Demand Responsive Service

Transit service that is provided in response to a pre-ordered or telephone reservation.

Development Impact Fee

A fee charged to private developers, usually on a per-dwelling-unit or per-square-foot basis, to help pay for infrastructure improvements necessitated as a result of the development.

DOT

Department of Transportation: At the federal level, the cabinet agency headed by the Secretary of Transportation that is responsible for highways, transit, aviation, and ports. The DOT includes the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the Federal Aviation Administration (FAA) and other agencies. The state DOT is Caltrans.

Drive Alone

See SOV.

EIR

Environmental Impact Report: An informational document, required under CEQA, which will inform public agency decision-makers and the public generally of the significant environmental effects of a project, possible ways to minimize significant effects and reasonable alternatives to the project.

EIS

Environmental Impact Statement (federal): National Environmental Policy Act (NEPA) requirement for assessing the environmental impacts of federal actions that may have a significant impact on the human environment.

EMFAC

An Emission Factor Model that estimates on-road motor vehicle emission rates for current year as well as backcasted and forecasted inventories.

Environmental Justice

The fair treatment of people of all races, cultures, and incomes during the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies.

EPA

Environmental Protection Agency: Federal agency established to develop and enforce regulations that implement environmental laws enacted by Congress to protect human health and safeguard the natural environment.

E-work

See Telework.

Expressway

Similar to a freeway, but with some signal-controlled intersections.

FAA

Federal Aviation Administration: The federal agency that regulates the use of airspace and is responsible for evaluating and disseminating information about hazards and obstructions to aviation. FAA is a component of the federal DOT.

Farebox Recovery Ratio

The proportion of operating expenses covered by passenger fares. The ratio divides the farebox revenue by the total operating expenses.

Farebox Revenue

The value of cash, tickets, and pass receipts given by passengers for payment for rides on public transit.

Fare Structure

The varying fees charged to use transit, normally differing by the age of the transit rider, single versus multiple transit trips, the type of service (Trolley, express bus, etc.), and, for some types of services, the length of the trip.

FAST Act

Fixing America's Surface Transportation: On December 4, 2015 President Obama signed into law a new five-year transportation authorization bill, the FAST Act. The FAST Act authorizes \$305 billion over fiscal years 2016 through 2020 for highway, highway and motor vehicle safety, public transportation, motor carrier safety, hazardous materials safety, rail and research, technology, and statistics programs. The FAST Act maintains our focus on safety, keeps intact the established structure of the various highway-related programs we manage, continues efforts to streamline project delivery and, for the first time, provides a dedicated source of federal dollars for freight projects.

Financially Constrained

Expenditures are said to be financially constrained if they are within limits of anticipated revenues.

Fiscal Year

The 12-month period established for budgeting purposes. In California, the commonly accepted fiscal year for governmental purposes begins on July 1 and ends on June 30.

Fixed Route Service

Service provided on a regular, fixed-schedule basis along a specific route, with vehicles stopping to pick up and deliver passengers to specific locations.

FRA

Federal Railroad Administration: Federal agency created to promulgate and enforce rail safety regulations, administer railroad assistance programs, conduct research and development in support of improved railroad safety and national rail transportation policy, and consolidate government support of rail transportation activities.

Freeway

A divided highway with limited access and grade-separated junctions, and without traffic lights or stop signs.

FSP

Freeway Service Patrol: An ongoing program to provide a roving tow and motorist aid service, with technicians who assist or remove stranded and disabled vehicles on designated urban freeways and state roadways during peak period commuting hours. It is operated by the RTPAs in cooperation with Caltrans and the California Highway Patrol.

FTA

Federal Transit Administration: The federal agency responsible for administering federal transit funds and assisting in the planning and establishment of areawide urban mass transportation systems. As opposed to FHWA funding, most FTA funds are allocated directly to local agencies, rather than to Caltrans.

Gas Tax

The tax applied to each gallon of fuel sold. Currently, the federal government has imposed a per-gallon tax of 18.4 cents, and the state has imposed a per-gallon excise tax of 35.3 cents per gallon which under SB 1 increases to 47.3 cents per gallon beginning November 1, 2017.

General Plan

A policy document required of California cities and counties by state law that describes a jurisdiction's future development in general terms. All land use decisions must be derived from the document, which includes text, maps, and other information. The General Plan contains a set of broad policy statements about the goals for the jurisdiction, and it also must contain nine mandatory elements: Land Use, Circulation, Housing, Conservation, Open Space, Noise, Safety, Environmental Justice and Air Quality.

GHG Emissions

Greenhouse Gas Emissions: Gases that influence global climate change. They include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride.

GIS

Geographic Information System: Mapping software that links information about where things are with information about what things are like. GIS allows users to examine relationships between features distributed unevenly over space, seeking patterns that may not be apparent without using advanced techniques of query, selection, analysis, and display.

GNP

Gross National Product: An estimate of the total value of goods and services produced in any specified country in a given year. GNP can be measured as a total amount or an amount per capita.

Grade Crossing

A crossing or intersection of highways, railroad tracks, other guideways, or pedestrian walks, or combinations of these at the same level or grade.

Greenfield

Also known as "raw land," land that is privately owned, lacks urban services, has not been previously developed, and is located at the fringe of existing urban areas.

HCD

State Department of Housing and Community Development: The state agency responsible for, among other things, overseeing the development of the Regional Housing Needs Allocation (RHNA) and the General Plan Housing Elements for all the local jurisdictions in the region.

HCM

Highway Capacity Manual: A resource for generating technical information that is used by transportation

planners, designers, and operators. The materials contained in the HCM represent a collection of state of the art techniques for estimating level of service for many transportation facilities and modes.

HCP

Habitat Conservation Plan: Established under Section 10 of the Endangered Species Act to allow development to proceed while protecting endangered species.

HDT

Heavy Duty Truck: Truck with a gross vehicle weight of 8,500 pounds or more.

Heavy Rail

Railroad services that operate in a mixed-user environment on conventional railroad tracks. Heavy rail services include freight trains, Amtrak, Commuter Rail and most conventional rail transit systems.

Highway

A general term usually referring to a state or federally-designated urban or rural route, designed to accommodate longer trips in the region.

Household

All people living in a housing unit, regardless of whether they are related to one another. Housing units include houses, condominiums, apartments, and mobile homes.

HOV

High Occupancy Vehicle: A vehicle that carries more than one occupant. Examples include carpools, vanpools, shuttles, and buses.

HOV Lane

High Occupancy Vehicle Lane: An exclusive road or traffic lane that typically has a higher operating speed and lower traffic volumes than a general purpose or mixed-flow lane. In California, vehicles that typically can use HOV lanes include carpools, vanpools, buses, other multi-passenger vehicles, motorcycles and emergency vehicles.

HPMS

Highway Performance Monitoring System: A federally mandated program designed by FHWA to assess the performance of the nation's highway system.

HSR

High Speed Rail: Railroad passenger service that, as defined by California state law, operates at maximum speeds of more than 200 miles per hour. Because of the speed, high speed rail normally operates on intercity (longer) routes.

HUD

U.S. Department of Housing and Urban Development: Federal agency charged with increasing homeownership, supporting community development, and increasing access to affordable housing free from discrimination.

ICM

Integrated Corridor Management: A collaborative, cooperative, and coordinated system in which corridor partners work together to improve mobility and safety across modes and networks for people and goods.

IGR

Intergovernmental Review Process: The review of documents by several governmental agencies to ensure consistency of regionally significant local plans, projects, and programs with AMBAG's adopted regional plans.

Incident

An incident may be a traffic collision, stalled vehicle, load spillage, or other event that affects one or more lanes of traffic.

Integrated Performance Management Systems Network

This network will connect the region's local transportation management centers, and will enable agencies to cooperatively manage the overall performance of the local and regional transportation systems.

Intercity Rail

Railroad passenger service that primarily serves longer trips, such as those between major cities or regions.

Intermodal

Passenger or freight transportation services which involve or use more than one type of transportation facility (or mode). Aviation, automobile, rail and transit are travel modes.

ITS

Intelligent Transportation Systems: A general classification of transportation technologies, management tools, and services made possible through advances in computer and communication technologies. ITS is used to make transportation systems safer and more efficient.

JPA

Joint Powers Authority: Two or more agencies that enter into a cooperative agreement to jointly wield powers that are common to them. JPAs are a vehicle for the cooperative use of existing governmental powers to finance and provide infrastructure and/or services in a cost-efficient manner.

LEP

Limited English Proficiency

Light Rail

A passenger transportation system of self-propelled vehicles that operate over steel rails located in the street, on an aerial structure, or on a separated right of way.

LIM

Low Income and Minority communities

LNG

Liquefied Natural Gas: An alternative liquid fuel derived from a natural gas that is cooled to below its boiling point so it becomes a liquid.

LOS

Level of Service: A qualitative measure describing operational conditions within a traffic stream and motorists' perceptions of those conditions. LOS ratings typically range from LOS A, which represents free-flow conditions, to LOS F, which is characterized by heavy congestion, stop-and-go traffic, and long queues forming behind breakdown points.

Low Engagement Community of Concern

A Low Engagement Community of Concern is any community in which 15 percent or more of households where English is not spoken very well and/or 15 percent or more of population are over the age of 25 without a high school diploma.

Low Income Community of Concern

A Low Income Community of Concern is any community in which 33 percent or more of households are low income, and/or 10 percent or more of the households are severely overcrowded, and/or 25 percent or more of the population is in poverty.

Low Mobility Community of Concern

A Low Mobility Community of Concern is any community in which 15 percent of the population are aged 65 and over has income below the poverty level, and/or if 15 percent of the households have zero car ownership, and/or 11.2 percent of the population is disabled.

LRT

Light Rail Transit: A type of transit vehicle and service that uses steel wheels and operates over railroad tracks. LRT systems generally serve stations averaging one-mile apart, are not remotely controlled, and can operate in a separated right of way or on public streets.

MAP-21

Moving Ahead for Progress in the 21st Century: On July 6, 2012 President Obama signed into law a new two-year transportation authorization, MAP-21. The first long-term highway authorization enacted since 2005, MAP-21 creates a streamlined, performance-based and multimodal program to address the challenges facing the U.S. transportation system.

MBARD

Monterey Bay Air Resources District: MBARD is a government agency that regulates sources of air pollution within the tri-county region.

Minority Community of Concern

A Minority Community of Concern is any community in which 65 percent or more of the population is non-White.

Mixed Flow

Traffic movement having autos, trucks, buses and motorcycles sharing traffic lanes.

Mixed Use

The combining of commercial, office and residential land uses to provide easy pedestrian access and reduce the public's dependence on driving. It can be implemented in multi-story buildings containing businesses and retail stores on the lower floors and homes on the upper floors.

Mode

A particular form of travel (e.g., walking, bicycling, traveling by automobile, traveling by bus, or traveling by train).

Mode Split or Mode Share

The percentage of trips that use each of the various travel modes.

Model

A mathematical description of a real-life situation that uses data on past and present conditions to make a projection.

MPO

Metropolitan Planning Organization: A federally-designated agency that is responsible for regional transportation planning in each metropolitan area. AMBAG is the MPO for the Monterey Bay Area.

MTIP

Metropolitan Transportation Improvement Program (MTIP): A five-year listing of major highway, transit, and active transportation projects including project costs, funding sources and development schedules. Compiled from priority lists submitted by local jurisdictions and transportation agencies.

MTP

Metropolitan Transportation Plan: A minimum 20-year plan that is required by state and federal law to guide the development of the region's transportation system.

NCCP

Natural Communities Conservation Plan: Program under the State Department of Fish and Game that uses a broad-based ecosystem approach toward planning for the protection of plants, animals and their habitats, while allowing compatible and appropriate economic activity.

Nominal Dollars

Actual dollars expended/received in a specific year without adjustments for inflation/deflation.

NTD

National Transit Database: The Federal Transit Administration's (FTA) national database for transit statistics.

O&M

Operations and Maintenance: The range of activities and services provided by the transportation system and for the upkeep and preservation of the existing system.

Off-Peak Period

The time of day when the lowest concentration of vehicles or transit riders are on the road or on another

transit facility. These times are generally before 6 A.M., between 9 A.M. and 3 P.M., and after 7 P.M.

Open Space

Generally understood as any area of land or water which, for whatever reason, is not developed for urbanized uses and which therefore enhances residents' quality of life. However, note that each county and city in California must adopt an open space element as part of its general plan. The element is a statement of local planning policies focusing on the use of unimproved land or water for: 1) the preservation or managed production of natural resources, 2) outdoor recreation, and 3) the promotion of public health and safety. Therefore, open space will be defined by each jurisdiction based on their own unique resources and environment.

Opportunity Areas

Opportunity Areas are places in the region with the highest chance for successful sustainable growth in the future; they are generally located where Transit Priority Areas (TPAs) and Economic Development Areas (EDAs) overlap.

OWP

Overall Work Program: AMBAG develops an OWP annually, describing proposed transportation planning activities for the upcoming fiscal year, including those required by federal and state law.

Paratransit

A specialized, door-to-door transport service for people with disabilities who are unable to use standard bus or commuter rail services.

Park-and-Ride

A travel option in which commuters park their personal vehicles in a public lot or other location and continue their trip via carpool, vanpool, or transit.

Park-and-Ride Lot

A facility where individuals can meet to utilize carpools, vanpools, and public transit to continue traveling to their destinations.

Passenger Miles

The total number of passengers carried by a transit system, multiplied by the number of miles each passenger travels. Passenger miles are normally measured on a daily or annual basis.

Peak Period

The time of day when the highest concentrations of vehicles or transit riders are on the road or on another transit facility. The morning peak period is generally considered to be from 6 A.M. to 9 A.M.; the afternoon peak period is from 4 P.M. to 7 P.M.

PEIR

Program Environmental Impact Report: Environmental review process used to evaluate the potential environmental effects of large-scale plans or programs.

PeMS

Performance Monitoring System: The PeMS program uses urban freeway data collected through freeway

loop detectors to provide current, ongoing data on freeway volumes and speeds that can be displayed graphically and exported to other monitoring applications.

Performance Measures

Objective, quantifiable measures used to evaluate the performance of the transportation system, and to determine how well planned improvements to the system are achieving established objectives.

Person Trip

Any person's one-way travel to any destination for any purpose. More specifically, a trip is the one-way movement from an origin to a destination, whereby each trip has two trip ends.

Place Types

A set of land use designations common to general plans for the three counties and 18 cities in the AMBAG region. These place type categories are meant to act as a common "language" so that the diverse general and specific plans across the Monterey Bay Area may be compared in a consistent and standard manner.

PSR

Project Study Report: A preliminary engineering report that documents agreements on the scope, a set of reasonable and feasible alternatives, the schedule, and the estimated cost of a project so that the project can be included in a future State Transportation Improvement Program (STIP).

PTA

Public Transportation Account: Provides funding for local transit, as outlined in the Transportation Development Act. The sole source of revenue for this Account is from the state sales tax on diesel fuel.

Public Transit

See Public Transportation.

Public Transportation

Travel by bus, rail, or other vehicle, either publicly or privately owned, that provides general or specialized service on a regular or continuing basis.

Ramp Metering

Electronic traffic control devices located at freeway access points to meter the entry of vehicles onto the freeway. The goal is to help optimize the movement of persons and vehicles.

Reverse Commute

Travel in the direction opposite to the main flow of peak period commute traffic.

RHNA

Regional Housing Needs Allocation: Quantifies the need for housing within each jurisdiction of the AMBAG region based on population and job growth projections. Communities then address this need through the process of completing the housing elements of their General Plans.

Ridership

The number of transit users, usually reported as a yearly total or as the average for a normal workday.

Ridesharing

A mode of travel in which at least two individuals share the same vehicle to get to their destination. Rideshare vehicles include private automobiles, privately owned and operated vans and buses, as well as public transportation.

Route Miles

The length of a transit route or service, multiplied by the number of trips made by transit vehicles or trains each day.

ROW

Right of Way: The land required for the construction and/or operation of transportation infrastructure.

RTIP

Regional Transportation Improvement Program: The state required multiyear capital improvement program for transportation projects using state and federal funds.

State Highway

A state-designated roadway. May be urban or rural.

Safe Routes to School

A state and federal program that funds education, encouragement campaigns, and infrastructure improvements to help decrease traffic congestion around schools and to make the journey to school on foot or bike more feasible and safer for children.

Safe Routes to Transit

A program that funds strategies to address the challenges of getting to and from a transit stop or station. These strategies include first-mile/last-mile solutions such as enhanced pedestrian crosswalks near transit stations, bicycle lanes that connect to transit and bike parking at transit stations, feeder-distributor bus/shuttle routes, car sharing/station cars and ridesharing.

SB 1

Senate Bill 1 (Chapter 5, Beall, 2017): known as The Road Repair and Accountability Act of 2017 provides the first significant, stable and ongoing increase in state transportation funding totaling an estimated \$5.2 billion annually. SB 1 created the Road Maintenance and Rehabilitation Account, and the Road Maintenance and Rehabilitation Program. Programs funded from this account include the Local Partnership Program, the Active Transportation Program, the State Highway Operation and Protection Program (SHOPP) and local streets and roads apportionments. Other programs funded in SB 1 include: increases in State Transit Assistance (STA), Solutions for Congested Corridors Programs, Trade Corridors Enhancement Account and State Transportation Improvement Program (STIP) stabilization.

SB 32

Senate Bill 32 (Chapter 249, Pavley, 2016): The California Global Warming Solutions Act of 2006 (known as AB 32) designates the State Air Resources Board as the state agency charged with monitoring and regulating sources of emissions of greenhouse gases. The state board is required to approve a statewide

greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions level in 1990 to be achieved by 2020 and to adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective greenhouse gas emissions reductions. SB 32 is an extension of AB 32 to require the state board to ensure that statewide greenhouse gas emissions are reduced to 40% below the 1990 level by 2030.

SB 45

Senate Bill 45 (Chapter 622, Statutes of 1997, Kopp): Established the current STIP process and shifted control of decision-making from the state to the regional level.

SB 375

Senate Bill 375 (Chapter 728, Steinberg): Established to implement the state's greenhouse gas (GHG) emission-reduction goals, as set forth by AB 32, in the sector of cars and light trucks. This mandate requires the California Air Resources Board to determine per capita GHG emission-reduction targets for each metropolitan planning organization (MPO) in the state at two points in the future—2020 and 2035. In turn, each MPO must prepare a Sustainable Communities Strategy (SCS) that demonstrates how the region will meet its GHG reduction target through integrated land use, housing and transportation planning.

SB 743

SB 743, which was signed into law in 2013, initiated an update to the CEQA Guidelines to change how lead agencies evaluate transportation impacts under CEQA, with the goal of better measuring the actual transportation-related environmental impacts of any given project. Starting on July 1, 2020, agencies analyzing the transportation impacts of new projects must now look at a metric known as vehicle miles traveled (VMT) instead of LOS. VMT measures how much actual auto travel (additional miles driven) a proposed project would create on California roads. If the project adds excessive car travel onto our roads, the project may cause a significant transportation impact.

SCS

Sustainable Communities Strategy: An element of the MTP, as required by SB 375, that demonstrates how development patterns and the transportation network, policies, and programs can work together to achieve the state's targets for reducing regional greenhouse gas (GHG) emissions from cars and light trucks in a region.

Self Employed

Self Employed workers are those who work for themselves, rather than for an employer (i.e. even if engaged in contract work for another company, a self-employed worker is, for reporting purposes, his or her own employer). Self Employed workers may work in any industry or occupation, and the same occupation may be classified differently depending on the compensation arrangement. For example a hair stylist who is on the payroll at a salon would be counted among industry employment while one who works independently and rents space at a salon would be counted as self-employed. Examples include freelance writers, housekeepers, day laborers, babysitters, consultants, and others.

SHOPP

State Highway Operation and Protection Program: Caltrans' three-year program to address traffic safety, roadway rehabilitation, roadside rehabilitation, or operations needs on the state highway system.

Smart Growth

A compact, efficient, and environmentally-sensitive pattern of development that provides people with additional travel, housing, and employment choices by focusing future growth away from rural areas and closer to existing and planned job centers and public facilities, while preserving open space and natural resources.

Social Equity

Social Equity means ensuring that all people are treated fairly and are given equal opportunity to participate in the planning and decision-making process, with an emphasis on ensuring that traditionally disadvantaged groups are not left behind.

SOV

Single Occupant Vehicle: Privately operated vehicle that contains only one driver or occupant.

STIP

State Transportation Improvement Program: A multi-year program of major transportation projects to be funded by the state. The CTC adopts the STIP every two years, based on projects proposed in RTIPs and from Caltrans.

STA

State Transit Assistance: State funding program for mass transit operations and capital projects. Current law requires that STA receive 50 percent of PTA revenues.

STBG

Surface Transportation Block Grant: Provides flexible funding that may be used by states and localities for projects on any federal-aid highway, bridge projects on any public road, transit capital projects and intracity and intercity bus terminals and facilities. A portion of funds reserved for rural areas may be spent on rural minor collectors.

TAZ

Traffic Analysis Zone: a geographic unit used for transportation modeling. A TAZ is smaller than a census tract and a Trip Distribution Zone (TDZ).

TDA

Transportation Development Act: State law enacted in 1971 that provided a 0.25 percent sales tax on all retail sales in each county for transit, bicycle, and pedestrian purposes. In non-urban areas, funds may be used for streets and roads under certain conditions.

TCRP

Transportation Congestion Relief Program.

TDM

Transportation Demand Management: Programs to reduce demand by automobiles on the transportation system, by promoting telecommuting, flex-time, bicycling, walking, transit use, staggered work hours, and ridesharing.

Telework

Teleworkers or e-workers are employees who conduct some or all of their daily work activities from their home or from a remote site other than the normal work site, in order to avoid commuting during peak periods.

Title VI of the Civil Rights Act

Title VI of the Civil Rights Act states that “no person in the United States, shall, on the grounds of race, color or national origin be excluded from participation in, be denied the benefits of, or be subject to discrimination under any program or activity receiving federal financial assistance.”

TPP

Transit Priority Project: Under SB 375, a project is exempt from CEQA if it (1) qualifies as a “transit priority project” and (2) meets the “sustainable communities project” requirements as declared by the legislative body of the local jurisdiction.

TransCAD

A computer model that simulates travel demand and its distribution to facilities within a geographic area.

Transportation Network Companies

Transportation Network Companies (TNCs) are organizations that provide pre-arranged transportation services for compensation using an online-enabled platform, usually via mobile apps, to connect passengers with drivers using the driver’s personal vehicle. TNCs include companies such as Lyft, Uber and Sidecar.

Transit

See Public Transportation.

Transit Management System

A field operations management system that enables improved transit route planning, scheduling, and performance monitoring.

Transit Oriented Development

Residential and employment growth that occurs near existing and planned public transit facilities.

Trip

See Person Trip and/or Vehicle Trip.

TSM

Transportation Systems Management: Strategies that allow transportation systems to operate in a way that maximizes the number of people traveling in a corridor or facility. These strategies include traffic flow improvements, ramp metering, tracking public transit vehicles; and keeping travelers informed.

U.S. DOT

United States Department of Transportation: The federal cabinet-level agency with responsibility for highways, mass transit, aviation, and ports and headed by the Secretary of Transportation. The DOT includes the Federal Highway Administration and the Federal Transit Administration, among other agencies.

U.S. EPA

U.S. Environmental Protection Agency: The federal agency charged with setting policy and guidelines, and carrying out legal mandates, for the protection of national interests in environmental resources.

Vanpool

A vehicle operating as a ridesharing arrangement, providing transportation to a group of individuals typically traveling directly between their homes and employment locations within the same geographic area.

V/C Ratio

Volume to Capacity Ratio: The volume of traffic divided by the capacity of a transportation facility. Traffic volume is defined as the number of vehicles passing (or projected to pass) a point or section of roadway in a given time interval. Capacity is defined as the maximum number of vehicles that reasonably can be expected to traverse that point or section of roadway during the same time period under prevailing roadway, traffic, and control conditions.

Vehicle Trip

A single vehicle movement from the beginning of travel to its destination, in a vehicle that is motor-driven (e.g., automobiles, motorcycles, trucks, buses and vans).

VMT

Vehicle Miles Traveled: On highways, a measurement of the total miles traveled by all vehicles in the area for a specified time period. It is calculated by the number of vehicles times the miles traveled in a given area or on a given highway during the time period. In transit, the number of vehicle miles operated on a given route or line or network during a specified time period.

Work Trip

Any “person” or “vehicle” trip whose purpose (on at least one trip end) involves work or work-related business.

Monterey Bay 2045
**Moving
Forward**

Sustainability.
Mobility.
Accessibility.
Economy.
Social Equity.





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Regional Growth Forecast

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2022 Regional Growth Forecast

Technical Documentation

Association of Monterey Bay Area Governments
Scheduled for Adoption June 2022

2022 Regional Growth Forecast

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Executive Summary

As the Metropolitan Planning Organization (MPO), the Association of Monterey Bay Area of Governments (AMBAG) carries out many planning functions for the tri-county area including development and maintenance of the regional travel demand model (RTDM), long range transportation planning and programming and acting as a regional forum for dialogue on issues facing the region. Most of AMBAG's projects are carried out in support of these major functions, including but not limited to the regional growth forecast. AMBAG develops the forecast with a horizon year that matches the planning timeline of the Metropolitan Transportation Plan (MTP) and the model years for the Regional Travel Demand Model (RTDM). In addition to informing regional planning processes, the forecast is used by local jurisdictions and special districts to inform local and subregional planning.

The last regional growth forecast was adopted in 2018. AMBAG staff began the process of developing a new forecast in spring 2019. This new forecast is referred to as the 2022 Regional Growth Forecast (2022 RGF).

In preparation for this forecast, AMBAG staff conducted a review of recently completed population, housing and employment forecasts. The results of this review indicated that most of the other MPOs in California are using a methodology that emphasizes employment growth as the primary driver of long-term population change at the regional scale. The traditional approach to forecasting population uses a cohort-component approach that considers three factors: births, deaths and migration. While birth and death data are readily available and trends are relatively predictable over time, migration tends to be much more difficult to track and forecast as it is heavily influenced by political and economic climates. For the development of the new forecast, AMBAG chose to progress towards a more contemporary approach that places a greater emphasis on employment. The assumption is that the economy is a reliable predictor of population growth.

AMBAG implemented an employment-driven forecast model for the first time in the 2014 forecast and contracted with the Population Reference Bureau (PRB) to test and apply the model again for the 2018 RGF and the 2022 RGF. To ensure the reliability of the population projections, PRB compared the employment-driven model results with results from a cohort-component forecast, a growth trend forecast, and the most recent forecast published by the California Department of Finance (DOF). All four models resulted in similar population growth trends. As a result of these reliability tests, AMBAG and PRB chose to implement the employment-driven model again for the 2022 RGF.

To disaggregate the forecast for each jurisdiction, AMBAG and PRB used the most current data available to update a series of shift-share models and replicate the methodology used in the prior forecast.

2022 Regional Growth Forecast

This technical document provides a description of the methodology for the development of the regional growth forecast figures in addition to the methodology for disaggregation of those figures. The regional and subregional forecast figures for population, jobs and housing were accepted by the AMBAG Board of Directors at the November 18, 2020 meeting.

Summary of the Forecast

The 2022 RGF projects that the region will add 65,500 jobs between 2015 and 2045, for a total of just over 442,800 jobs by 2045. The regional growth rate is slightly slower than nation- and state-level forecasts, reflecting historical growth rates that have tended to be slightly slower than either the state or nation. Furthermore, job growth is expected across most employment sectors. The fastest-growing industries include Site-Based Skilled Trade, Health Care and Social Assistance, and Other Services. Conversely, Retail is expected to be the slowest-growing industry. Notably, while many models for the U.S. predict declines in agricultural job growth, the AMBAG region is experiencing steady agricultural job growth.

This forecast projects that the region's population will grow by approximately 107,500 people between 2015 and 2045, for a total population of just under 869,800 in 2045. This is slightly lower than prior forecasts and follows the slowing growth rates seen at both the state and national level. This revised growth trend also reflects the most current population estimate for the region. As a result of declining fertility, stalled improvements in life expectancy, and falling international migration, the 2020 population estimate was more than 16,000 lower than prior forecasts predicted. In addition to slower growth, the new forecast predicts an older age distribution, with a larger proportion of the population age 65 and older.

An aging population affects the household and housing unit forecasts. While population growth will slow, which reduces future housing demand, older people are more likely to live alone or in small households. This shift offsets the lower population forecast with a slight upward effect on housing demand. The net result is that the region is expected to build just over 42,200 housing units by 2045, for a total of approximately 304,900 units.

Section 1: Process for Forecast Completion

Following the preparation of the regional forecast figures, AMBAG staff began the process of disaggregating the figures to each of the jurisdictions using historical data to develop a baseline disaggregated forecast. The initial results were a purely quantitative application of the methodology. These preliminary draft disaggregated numbers were presented for discussion purposes at one-on-one meetings held by AMBAG staff with each of the jurisdictions, the Local Agency Formation Commissions,

2022 Regional Growth Forecast

the Fort Ord Reuse Authority, the University of California, Santa Cruz and the California State University, Monterey Bay. AMBAG staff also provided materials for these meetings that outlining the data sources and methodology for the regional forecast figures as well as the preliminary draft disaggregated forecast figures. The intent of the first round of meetings was to gather information and data that was then used to make adjustments to the forecast. (See Attachment 1 for a list of meeting dates, times and attendees.)

These preliminary draft disaggregated numbers were adjusted based on information and feedback provided by each jurisdiction. In addition, new data became available. The release of vintage 2020 estimates from the California Department of Finance showed 2019 population approximately 7,000 lower than in the preliminary estimate, although housing estimates were relatively stable. These updates necessitated minor revisions to the regional forecast.

Staff updated the regional growth forecast to reflect the most current information. The entire revised forecast, regional and subregional, was re-circulated for a second round of comments. After the second round of comments were received, AMBAG staff incorporated additional input and prepared a revised draft of the disaggregated forecast figures. Staff circulated the revised population, employment and housing forecast which incorporated additional comments from the Board of Directors. The final draft was accepted for planning purposes only by the AMBAG Board of Directors at its meeting on November 18, 2020. The final growth forecast is scheduled for adoption along with the 2045 Metropolitan Transportation Plan/Sustainable Communities in June 2022.

Section 2: Development of the Regional Growth Forecast

In spring 2019, AMBAG asked PRB to prepare regional employment, population and housing projections to 2045. This section documents the findings of the work by PRB and includes a summary of the methodology, a description of the projections and an explanation of past, current and projected job growth in the region.

Summary of the 2022 Regional Growth Forecast

The 2022 RGF projects that the region will add 65,500 jobs between 2015 and 2045, for a total of just over 442,800 jobs by 2045. (See Table 1) The regional growth rate is similar to national forecasts but slightly slower than state-level forecasts. Furthermore, job growth is expected across most employment sectors. The fastest-growing industries include Site-Based Skilled Trade, Health Care and Social Assistance, and Other Services. Conversely, Retail is expected to be the slowest-growing industry. Notably, while many models for the U.S. predict declines in agricultural job growth, the AMBAG region is experiencing steady agricultural job growth.

2022 Regional Growth Forecast

This forecast projects that the region's population will grow by approximately 107,500 people between 2015 and 2045, for a total population of just under 869,800 in 2045. (See Table 1) This is slightly lower than prior forecasts and follows the slowing growth rates seen at both the state and national level. This revised growth trend also reflects the most current population estimate for the region. Despite an upward revision to the estimate, the revised DOF population estimate for 2015 was more than 3,000 lower than prior forecasts predicted. As such, an adjustment was made in this forecast of population growth to account for the sharp fall in fertility rates and international migration that occurred during the recession years that have not fully rebounded. In addition to slower growth, the new forecast predicts an older age distribution, with a larger proportion of the population age 65 and older.

An aging population affects the household and housing unit forecasts. While population growth will slow, which reduces future housing demand, older people are more likely to live alone or in small households. This shift offsets the lower population forecast with a slight upward effect on housing demand. The net result is that the region is expected to build just over 42,200 housing units by 2045, for a total of approximately 304,900 units. (See Table 1)

Table 1: Forecast Summary

	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045
Population	710,598	719,561	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776
Change		8,963	13,147	29,533	12,488	25,997	24,266	17,197	15,639	11,948
% Change		1%	2%	4%	2%	3%	3%	2%	2%	1%
Households	228,260	234,869	236,059	238,862	243,863	253,106	262,493	269,175	273,462	276,730
Change		6,609	1,190	2,803	5,001	9,243	9,387	6,682	4,287	3,268
% Change		3%	1%	1%	2%	4%	4%	3%	2%	1%
Housing	247,080	256,467	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900
Change		9,387	3,789	2,404	5,152	9,833	10,741	7,966	4,955	3,593
% Change		4%	1%	1%	2%	4%	4%	3%	2%	1%
Jobs				377,335	406,280	410,017	418,132	425,845	434,147	442,824
Change				25,600	28,945	3,737	8,115	7,713	8,302	8,677
% Change					8%	1%	2%	2%	2%	2%

Sources: Jobs data for 2000-2015 are from California Employment Development Department and InfoUSA; population, household, and housing data for years 2000-2020 are from the U.S. Census Bureau and the California Department of Finance. Forecast years were prepared by AMBAG and PRB.

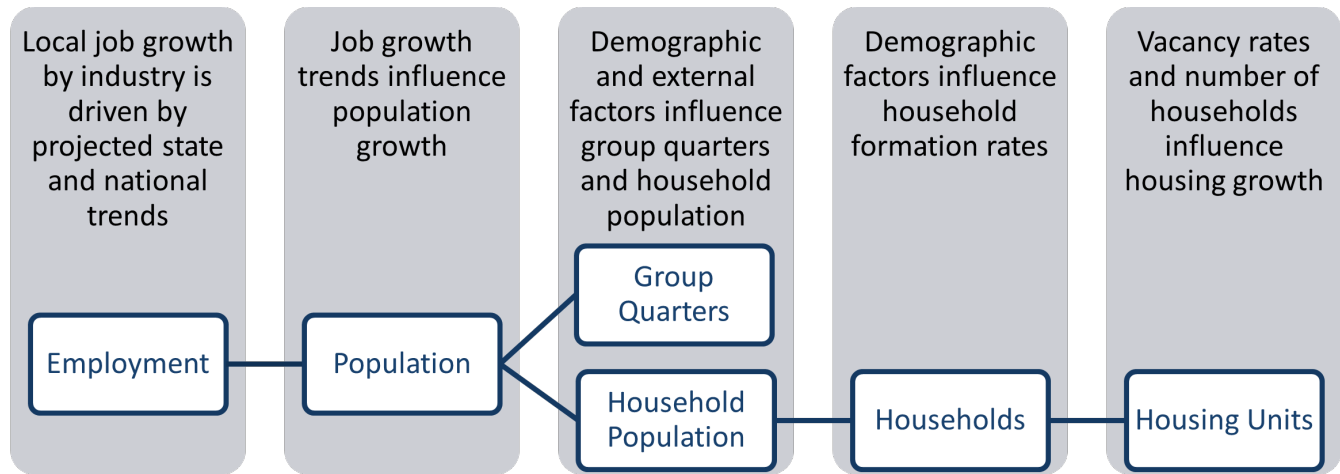
Regional Growth Forecast Methodology

As shown in the flow chart below, the forecast uses a model that predicts employment growth using a shift-share model based on local data as well as state and national trends. Population growth is then driven by employment growth. Household and housing growth are driven by population growth, demographic factors and external factors (explained below). This approach was vetted and approved by the AMBAG Board of Directors in 2014 for use in the metropolitan transportation plan, Moving Forward 2035 Monterey Bay. While the methodology for the 2022 RGF remains the same, the models

2022 Regional Growth Forecast

have been updated to include current data, a revised base year of 2015 and a new horizon year of 2040.

Figure 1: Regional Growth Forecast Process



1. **Employment:** Employment is measured as the number of jobs by place of work. Employment growth by industry is driven by projected national and statewide trends for all industries in the region using a shift-share model.
2. **Population:** Population is the total resident population of the region. Job growth trends influence population growth. The forecast of total population is based on historical trends in the ratio of population to employment in the AMBAG region. Projections of demographic characteristics (i.e., population by age, sex, and race/ethnicity) in the 2022 RGF relied on a proportional approach based on demographic projections from the California Department of Finance (DOF).
3. **Household Population and Group Quarters:** Household population is the population that lives in a housing unit. Group quarters population is the population that lives in a group living arrangement such as a dorm, barracks, correctional institution, or congregate care facility. Demographic factors (e.g., age, sex, race/ethnicity) and external factors (e.g., major group quarters facilities like colleges and universities, correctional facilities, etc.) influence the household population and group quarters population.
4. **Households/Occupied Housing Units:** A household is a person, or group of people, living in a house. Because a household, by definition, occupies a housing unit, households are equivalent to and synonymous with occupied housing units. Household projections are driven by household formation rates. Household formation rates are calculated as the ratio of households divided by the household population. Household formation rates are the inverse of average household size.
5. **Housing Units:** Housing is the total number of housing units, including both occupied and vacant structures. Housing includes primary residences, second homes, accessory dwelling

2022 Regional Growth Forecast

units, vacation rentals, farmworker housing, and any other habitable structure—including unauthorized units. The only type of dwelling excluded from the housing inventory is group quarters (dorms, barracks, congregate care, etc.).

Housing projections are driven by the household population projection, demographic characteristics of the household population (age, sex, race/ethnicity), household formation rates, and housing vacancy rates. Vacancy rates are calculated as the share of all units (including vacation rentals, unauthorized dwellings, etc.) that are not currently occupied.

Data sources include the California Department of Finance, California Employment Development Department, the U.S. Bureau of Labor Statistics and the U.S. Census Bureau.

For more information on the definitions of housing and group quarters, see Attachment 4.

Step 1: Employment

The AMBAG region is projected to add 65,500 jobs between 2015 and 2045, for a total of just over 442,800 jobs by 2045. The 2015 base year data were re-benchmarked to reflect revisions to county totals published by the California Employment Development Department, as well as an employer database from InfoUSA, and extensive ground-truthing conducted by AMBAG staff. (See Table 2 and Figure 2.) Employment grew faster in the 2015-2020 time period than had been anticipated in the 2018 RGF, but is expected to return to a slow-growth trend.

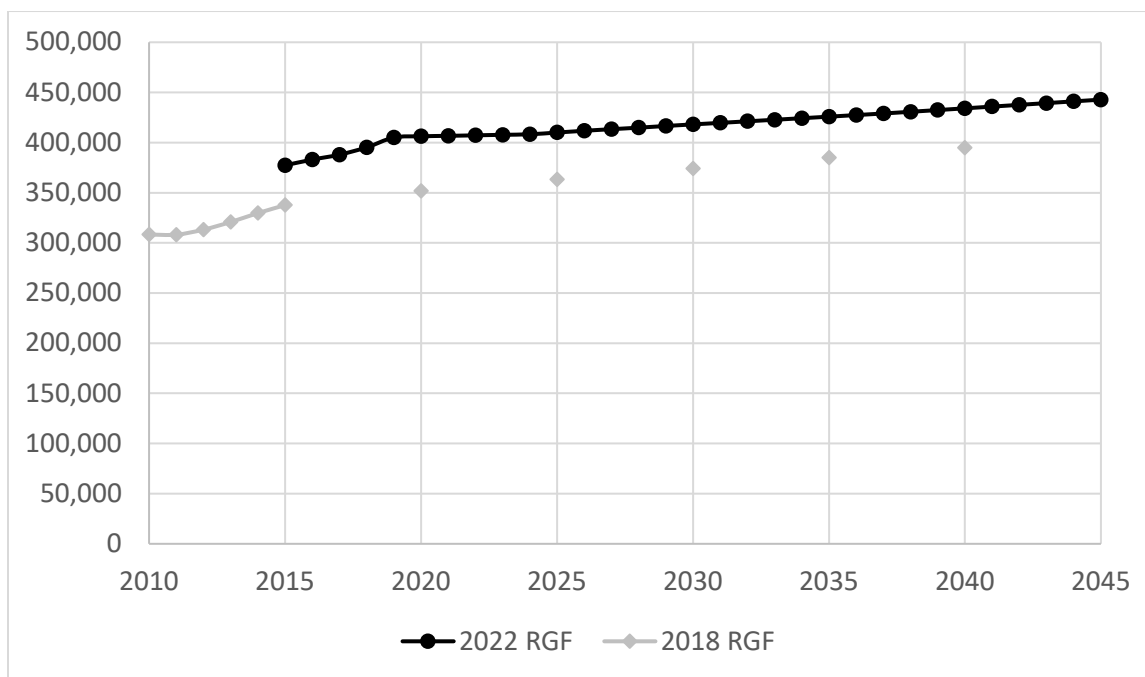
2022 Regional Growth Forecast

Table 2: Forecast Comparison of Employment

Forecast	2010	2015*	2020	2025	2030	2035	2040	2045
2018 RGF	308,300	337,600	351,800	363,300	374,100	384,800	395,000	N.A.
% Change		10%	4%	3%	3%	3%	3%	N.A.
2022 RGF		377,335	406,280	410,017	418,132	425,845	434,147	442,824
% Change			8%	1%	2%	2%	2%	2%

Sources: Data for years 2010 and 2015 are from the California Employment Development Department.

*In the 2022 RGF, data for 2015 were re-benchmarked using updated estimates from the California Employment Development Department, an employer database InfoUSA, and extensive ground-truthing. Forecast years were prepared by AMBAG and PRB.

Figure 2: AMBAG Region Employment Forecast

Sources: Data for years 2010-2014 are from the California Employment Development Department. In the 2022 RGF, data for 2015 were re-benchmarked using updated estimates from the California Employment Development Department, an employer database InfoUSA, and extensive ground-truthing. Forecast years were prepared by AMBAG and PRB.

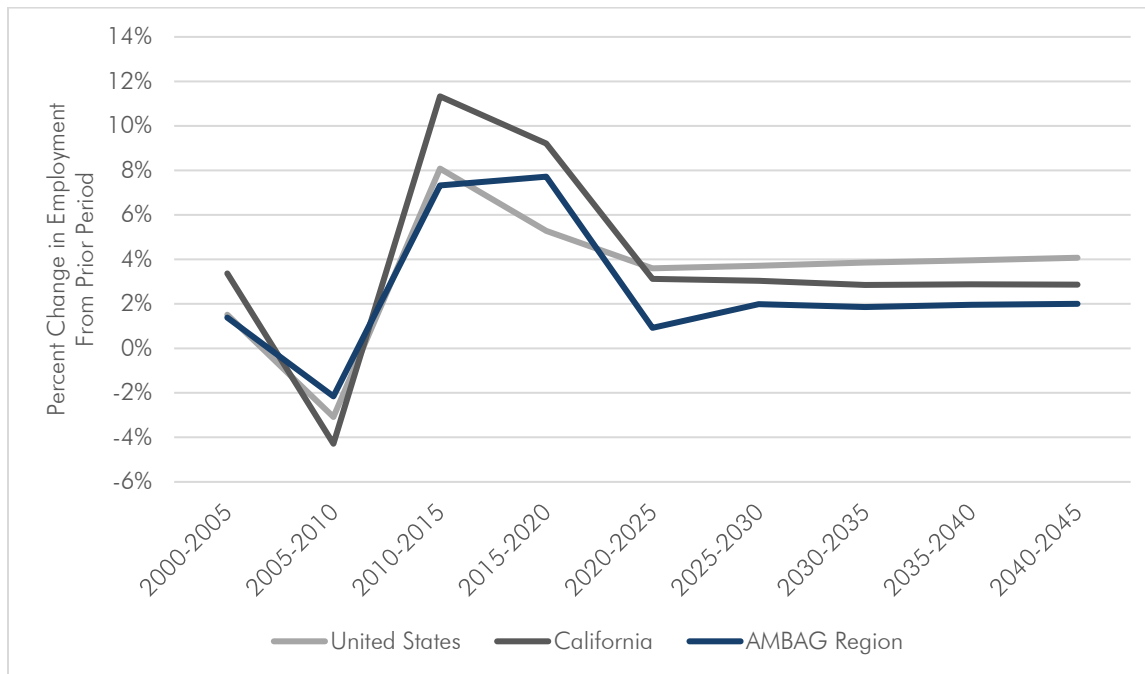
Job projections to 2045 were developed for each major NAICS industry category by projecting the AMBAG region share of state job growth based on the analysis of trends in the period from 2005 to 2019. The NAICS industries were then grouped into major industry sectors for the transportation model. Industry categories are described in Attachment 2.

The AMBAG region experienced job growth slower than the state, and similar to the nation between 2000 and 2019. (See Figure 3.) The region is projected to experience job growth at a slightly slower rate than the state and nation. The primary reason for this below-average job growth is the region's below-

2022 Regional Growth Forecast

average concentration in fast-growing sectors such as information and professional services. The region also has a below-average exposure to growth in foreign trade.

Figure 3: Employment Change



Sources: Data for years 2000-2015 from the U.S. Bureau of Labor Statistics and California Employment Development Department. Forecast years were prepared by AMBAG and PRB with input from U.S. Bureau of Labor Statistics, Employment by Major Industry Sector: 2014-2024; California Department of Transportation, California County-Level Economic Forecast 2014-2040, September 2014; and from the California Employment Development Department, Industry Employment Projections.

Positive growth factors include above-average performance relative to state trends in tourism and agriculture. Agriculture has shown strong growth for several years, and new crops such as cannabis as well as new investments in processing facilities, portend that the industry will continue to grow. However, any job growth due to new crops may be mitigated by losses due to increased mechanization in agriculture and agricultural processing.

Method for Producing the Employment Forecast

The AMBAG region job projections were developed using three guiding principles:

1. The AMBAG region projections were based on projections of job growth in the nation and state. The national and state projections provide the **pool of job opportunities** and the AMBAG region projections reflect historical trends in the **share** of national and state job growth that will locate in the AMBAG region.

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2. The AMBAG region **share** of national and state job growth is determined by the industry composition of job growth and the projected share of job growth locating in the AMBAG region. If national and state job growth is concentrated in sectors where the AMBAG region has a competitive advantage, the region's projected job growth will be higher than if national and state job growth is concentrated in sectors where the region has a below-average share of jobs and a relatively poor competitive position.
3. The analysis of competitive advantage is focused on sectors in the AMBAG region **economic base**. The region's economic base consists of those sectors that sell a high proportion of goods and services to customers outside the region. They export goods and services to customers in world and national markets and markets throughout California. Key examples of economic base sectors in the AMBAG region are agriculture and tourism. The UC Santa Cruz campus and state prison are also examples of activities that do not primarily serve local residents.

U.S. and California Job Growth to 2045

The starting point for the AMBAG projections is an examination of future U.S. and California job growth for total jobs and major industry sectors. The U.S. job growth projections are based on the most recent forecast from the U.S. Bureau of Labor Statistics and an extrapolation of growth trends to 2045. California job growth projections are based on an industry-level forecast published by the California Department of Transportation, as well as data from the California Employment Development Department and PRB.

The California industry projections identify the structure of job growth as an input to AMBAG region job projections. The resulting projections of job growth are shown below.

The nation is expected to add 41 million jobs between 2015 and 2045 for an increase of 27 percent. Growth, nationwide, is expected to be fairly constant throughout the forecast period. The state of California is projected to experience job growth that is slightly faster than the nation's job growth in the early years of the forecast and to slow down to a rate more similar to the national growth rate by 2045.

The state is projected to see a 26 percent increase in total jobs between 2015 and 2045. The pattern of California industry job growth is shown below and was used in developing AMBAG region job projections. (See Table 3)

2022 Regional Growth Forecast

Table 3: California Jobs by Major Industry (000s)

	2010	2015	2020	2045	Avg. Annual Growth Rate		
					2010-2015	2015-2020	2015-2045
Agriculture	382.8	422.3	426.8	433.1	2.0%	0.2%	0.5%
Mining	24.6	26.4	22.8	23.8	1.4%	-2.9%	-2.1%
Construction	560.0	732.1	892.9	996.2	5.5%	4.1%	6.4%
Manufacturing	1,247.9	1,303.0	1,340.4	1,439.2	0.9%	0.6%	2.0%
Wholesale	629.7	691.0	699.2	789.8	1.9%	0.2%	2.7%
Retail	1,516.5	1,660.1	1,683.3	1,812.5	1.8%	0.3%	1.8%
Transp., Warehousing, Utilities	466.9	557.8	682.2	717.9	3.6%	4.1%	5.2%
Information	428.4	488.6	562.0	714.0	2.7%	2.8%	7.9%
Financial Serv.	758.8	800.8	840.1	1,096.7	1.1%	1.0%	6.5%
Prof. & Business Serv.	1,224.1	1,431.6	1,591.7	1,861.8	3.2%	2.1%	5.4%
Educ. & Health Serv.	2,993.9	3,526.1	3,988.6	4,792.4	3.3%	2.5%	6.3%
Leisure & Hospitality	1,500.8	1,828.3	2,056.8	2,348.2	4.0%	2.4%	5.1%
Other services (excl. gov't)	483.6	543.6	583.3	797.4	2.4%	1.4%	8.0%
Government	2,448.4	2,463.0	2,636.6	2,959.3	0.1%	1.4%	3.7%
Self Employed	1,192.6	1,180.9	1,275.7	1,519.6	-0.2%	1.6%	5.2%
Total Jobs	15,859.0	17,655.6	19,282.4	22,301.7	2.2%	1.8%	4.8%

Sources: Data for years 2005, 2010 and 2015 from the Employment Development Department. Forecast years were prepared by PRB with input from California Department of Transportation, California County-Level Economic Forecast 2018-2050, September 2019 and from the California Employment Development Department, California Industry Employment Projections.

The projections show substantial differences in the expected growth rate among industries between 2015 and 2045 and these differences tell a story about where job growth is expected and where job levels will remain flat or decline. These differences directly influenced the AMBAG region job projections described below.

It is important to note that the statewide projections listed above were completed before the start of the coronavirus pandemic. The net result is unknown at this time, and projections will be updated as new information becomes available. AMBAG will begin the next update to the Regional Growth Forecast will begin in 2023.

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The AMBAG Region Economy and Job Growth

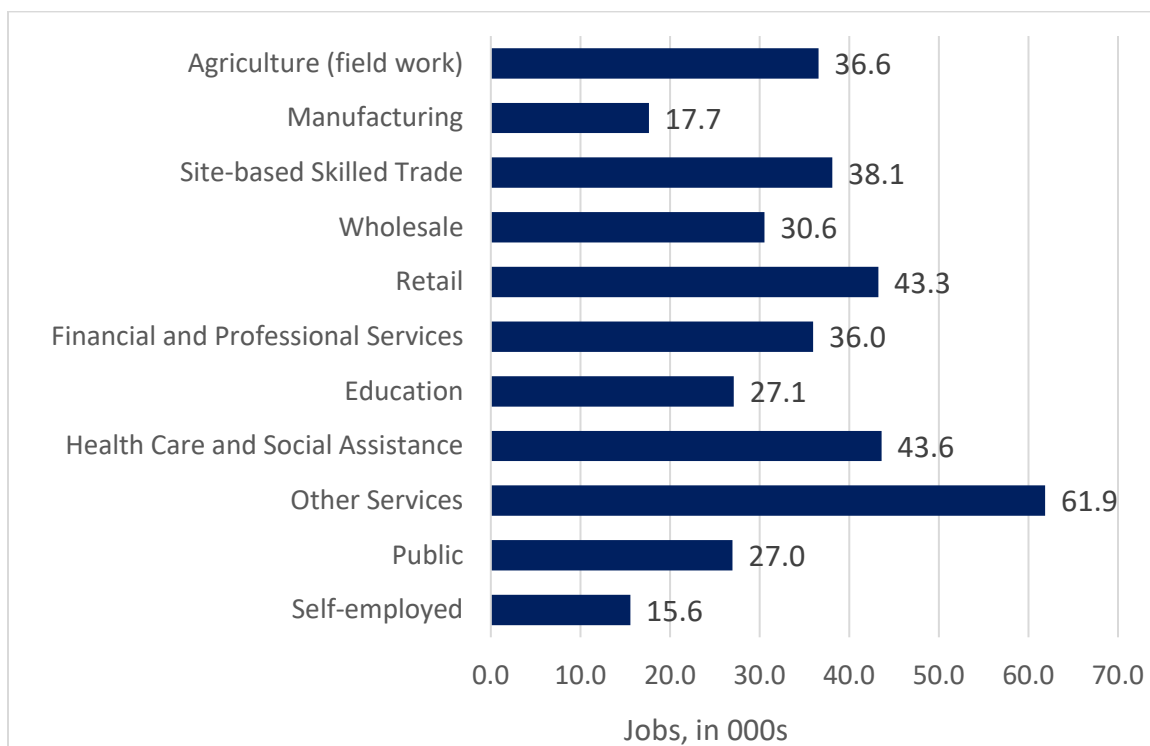
The previous section provided an overview of the current trends in the California economy. As previously noted the AMBAG region's job projections are based on an analysis of the regional economy and its relationship to the growth forecasted for California. The national and state projections provide the **pool of job opportunities** and the AMBAG region forecast reflects judgments about the **share** of national and state job growth that will locate in the AMBAG region. What follows is a description of the current structure of the regional economy as well as the resulting job projections based on the region's share of industries.

The database used for analysis and projections consists of annual industry employment data from 1990 through 2019, from the California Employment Development Department. for each of the three counties in the region and added together to produce an AMBAG region jobs database.

In addition to the historical time-series, AMBAG re-benchmarked the 2015 employment data to more accurately reflect local employment, and grouped the data to eleven categories for modeling purposes. This process is described in more detail in the "Sub-County Employment Database and Re-benchmarking" section, below. Industry definitions are included in Attachment 2.

The largest sectors are Other Services (including hotels, restaurants, and personal services), Health Care and Social Assistance, and Retail. (See Figure 4.)

Figure 4: Jobs by Industry Sector in 2015, AMBAG Region



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Sources: Data from the California Employment Development Department, InfoUSA, and AMBAG.

The AMBAG regional economy has an industry structure that is quite different in some ways than the statewide structure or the industry structure in regions like Southern California or the San Francisco Bay Area. One difference is the large share of jobs in Agriculture. Nineteen percent of total jobs in the AMBAG region are in Agriculture compared to just over two percent statewide. Other sectors with above average shares in the region include Public, Other Services, and Self Employed. Conversely, the AMBAG region has a below average share of jobs in the fast-growing, high wage Financial and Professional Services sectors.

AMBAG Region Forecast Job Trends, by Industry

The AMBAG region is expected to have moderate job growth between 2015 and 2040.

Table 4: AMBAG Region Jobs by Major Industry (000s)

	2015	2020	2025	2030	2035	2040	2045	Avg. Annual Growth Rate	
								2015-2020	2015-2045
Agriculture	36,600	40,100	40,100	40,200	40,300	40,500	40,600	1.8%	0.3%
Manufacturing	17,700	19,700	19,800	19,900	20,000	20,100	20,200	2.2%	0.3%
Site-based Skilled Trade	38,100	42,900	43,700	44,900	45,600	46,600	47,700	2.4%	0.6%
Wholesale	30,600	33,300	32,800	33,200	33,500	33,800	34,100	1.7%	0.3%
Retail	43,300	42,100	42,200	42,500	43,000	43,500	44,000	-0.6%	0.0%
Financial and Professional Services	36,000	37,100	37,400	38,500	39,600	40,800	41,900	0.6%	0.4%
Education	27,100	29,900	30,100	30,700	31,400	32,200	33,100	2.0%	0.5%
Healthcare and Social Assistance	43,600	47,400	48,900	50,200	51,500	52,900	54,400	1.7%	0.6%
Other Services	61,900	68,500	69,100	71,200	73,200	75,200	77,300	2.0%	0.6%
Public	27,000	29,700	29,800	30,200	30,700	31,200	31,900	1.9%	0.4%
Self-employed	15,600	15,700	16,200	16,600	16,900	17,300	17,700	0.1%	0.3%
Total	377,300	406,300	410,000	418,100	425,800	434,100	442,800	1.5%	0.4%

Sources: Data for years 2015 from the California Employment Development Department, InfoUSA, and AMBAG. Forecast years were prepared by AMBAG and PRB.

Note: Parts may not sum to total due to independent rounding.

The industry-level trends in the AMBAG Region are as follows:

- Agricultural job growth has been strong for the past 10 years, and while the rate of growth is expected to slow, the region's agricultural industry will still grow faster than state or national projections.
- The region lost Manufacturing jobs during the recession, but recent years have seen a turnaround. Growth is expected to be slow but steady in future years.

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- Site-based Skilled Trade (which includes construction) saw steep job losses during the recession and a bounce-back through 2019. Future growth is expected to be moderate.
- The Wholesale and Retail sectors both lost jobs in recession years, and retail has continued to decline. Growth is expected to remain low through the forecast.
- Financial and Professional Services is expected to grow at a moderate rate.
- Education has grown rapidly in recent years, but growth will likely slow as population growth slows.
- Healthcare and Social Assistance has seen steady growth, even in recession years. This is expected to continue as the population ages and demand for health services increases.
- Other Services (including hotels, restaurants, and personal services) lost jobs in the AMBAG region during the recession, but growth rebounded between 2010 and 2015. Growth is expected to be moderate in the future.
- The Public sector, locally, lost jobs between 2008 and 2013 as a result of the recession. Those losses began to reverse in 2014, and the sector is expected to see modest growth in the future.
- Self-employment tends to be counter-cyclical as people who lose their wage-and-salary job during a recession may turn to self-employment. Growth forecasts are based primarily on population growth.

Step 2: Population

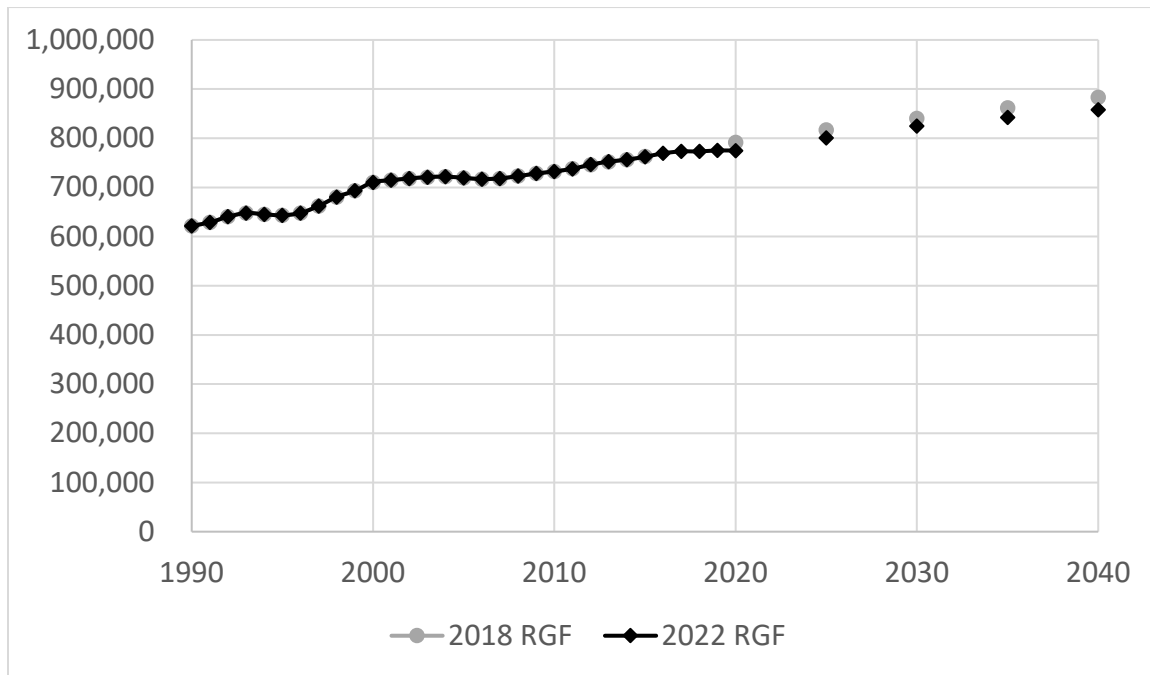
The region is projected to add approximately 107,500 people between 2015 and 2045, for an increase of 14 percent. The 2045 projected regional population of 869,776 is lower than the 883,300 residents projected for year 2040 in the 2018 RGF. (See Table 5 and Figure 6) This lower population forecast reflects slower growth than anticipated since the 2010 Census due to record low birth rates, stalled improvements in life expectancy, and lower migration rates. This slower growth in population is possible, despite faster growth in employment, due to changing unemployment and labor force participation rates.

Table 5: Comparison of Forecasts for Population

Forecast	2010	2015	2020	2025	2030	2035	2040	2045
2018 RGF	732,708	762,676	791,600	816,900	840,100	862,200	883,300	N.A.
% Change		4%	4%	3%	3%	3%	2%	N.A.
2022 RGF	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776
% Change		4%	2%	3%	3%	2%	2%	1%

Sources: Data for years 2010-2020 are from the California Department of Finance. Forecast years were prepared by AMBAG and PRB.

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Figure 5: AMBAG Region Population Forecast

Sources: Data for years 1990-2020 are from the California Department of Finance. Forecast years were prepared by AMBAG and PRB.

Despite the lower population forecast, it is expected that AMBAG will continue to see population and housing growth associated with job growth outside of the region. In particular, job growth in Silicon Valley, combined with high housing prices, is expected to lead to an increase in the number of commuters to Bay Area jobs that live in the AMBAG region.

Method for Producing the Population Forecast

In preparing for this forecast, PRB tested a variety of methods for the population forecast, each of which produced similar results. (Findings are summarized in Attachment 3.) As a result of this review, PRB and AMBAG staff determined that the employment-driven population growth forecast model used in the 2014 RGF was suitable for the 2018 RGF.

Benchmark Population

All population projections are benchmarked to the 2010 Census counts which include people whose primary residence on “Census Day” (April 1, 2010) is within the region, regardless of citizenship status. It is recognized that the AMBAG region is home to a sizeable seasonal population (seasonal workers, who often work in agricultural occupations, and their families). Seasonal worker populations have

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historically been found to be “hard to count” (HTC) in official statistics.¹ In an encouraging development, the 2010 Census was more effective than prior decennial census efforts in reaching, and enumerating, HTC areas. Specifically, “Census 2010 coverage of households in the HTC tracts in the San Joaquin Valley and Central Coast counties... was significantly improved from previous decennials,” but some undercount remained a problem.²

The timing of data collection has also historically been a challenge for counting seasonal workers in the AMBAG region. Migratory workers are counted based on their location on Census Day. If the agricultural work cycle is in a lull in March and April, but ramps up at other times of the year, the worker population may be lower on Census Day than it is at other times of the year. However, it has been observed through informal surveys (i.e., for the AMBAG Regional Agricultural Vanpool Feasibility Study) that the seasonal population in the AMBAG region has been moving towards a trend of year-round residence, particularly with regard to agricultural jobs.

Given these two trends – better enumeration of HTC populations and a trend toward year-round residence – the seasonal population is increasingly likely to be counted in the decennial Census and in California Department of Finance demographic estimates. That said, seasonal workers who were not present on Census Day would not have been counted in the AMBAG region, and undercount remains a problem for seasonal populations, nationwide. Thus, to the extent that seasonal workers are present and counted in official statistics, they are also included in this forecast.

The AMBAG region population projections were benchmarked against prior decennial Census and employment data, and derived by anticipating that the regional population to job ratio will move in line with the statewide trend as it has in the past.

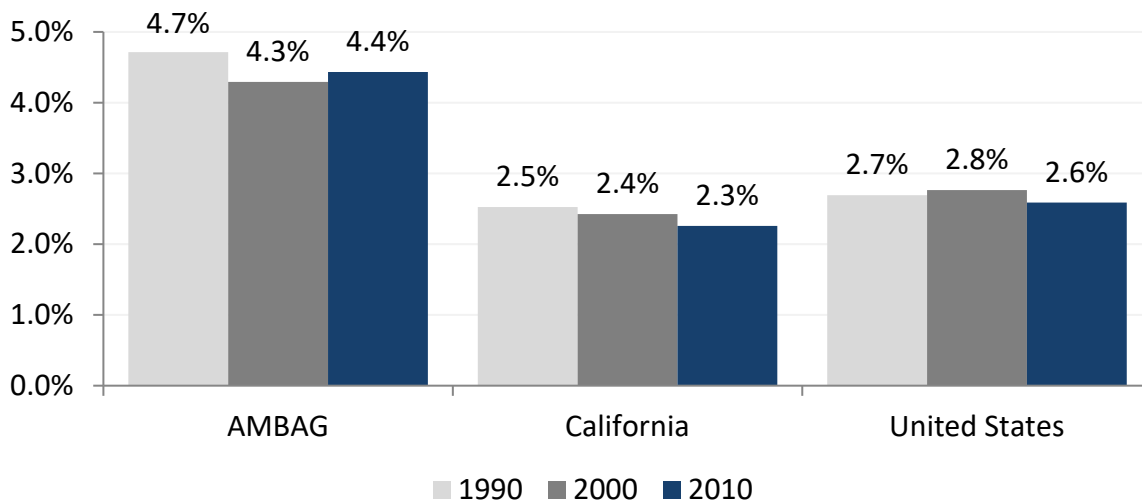
U.S., California and AMBAG Region Demographic and Economic Trends to 2045

The AMBAG region has an above-average share of residents who live in group quarters and are not tied to the regional job market. This trend has continued since 1990 although the mix of group quarters residents has changed. (See Figures 6 and 7.) Changes in group quarters population, such as growth at the region’s universities, will play a role in regional growth through 2045.

¹ U.S. General Accounting Office. “Key Efforts to Include Hard-to-Count Populations Went Generally as Planned; Improvements Could Make the Efforts More Effective for Next Census” (December 2010), accessed at <http://www.gao.gov/new.items/d1145.pdf> on October 4, 2016.

² California Rural Legal Assistance, Inc. “2010 Census Enumeration of Immigrant Communities in Rural California: Dramatic Improvements but Challenges Remain” (November 2010), accessed at <http://www.crla.org/sites/all/files/content/uploads/Census/Census10-JBS-CRLA.pdf> on October 4, 2016.

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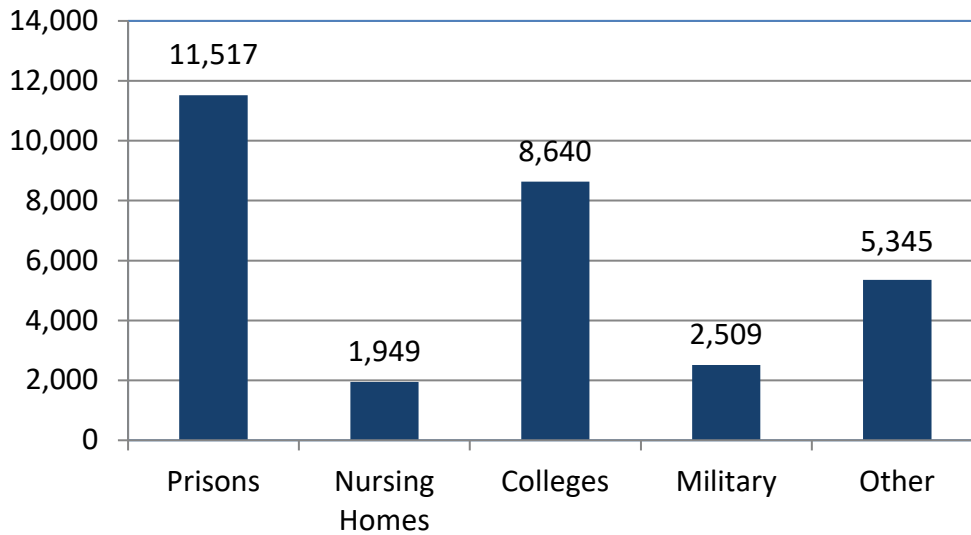
Figure 6: Group Quarters as a Percent of Population

Sources: U.S. Census Bureau, California Department of Finance

In 1990 there was a substantial military group quarters presence around the Fort Ord base. Since then the military population has declined due to the closure of the base, but that group quarters population has been offset by an increase at colleges (primarily UC Santa Cruz and CSU Monterey Bay) and an increase in the state prison population. In future years it will be important to continue watching the development and growth of military institutions in the region. There is still a strong military and naval presence in Monterey County including the Presidio area as well as Fort Hunter Liggett in the southern portion of the County.³

³ While Fort Hunter Liggett has a small permanent population, they are a large training facility and host a substantial amount of trainees every year. Not only will it be important to follow the FHL plans for expansion from a population perspective, but it will also be important to consider the presence of the FHL in transportation planning given the Fort's heavy reliance on Highway 101.

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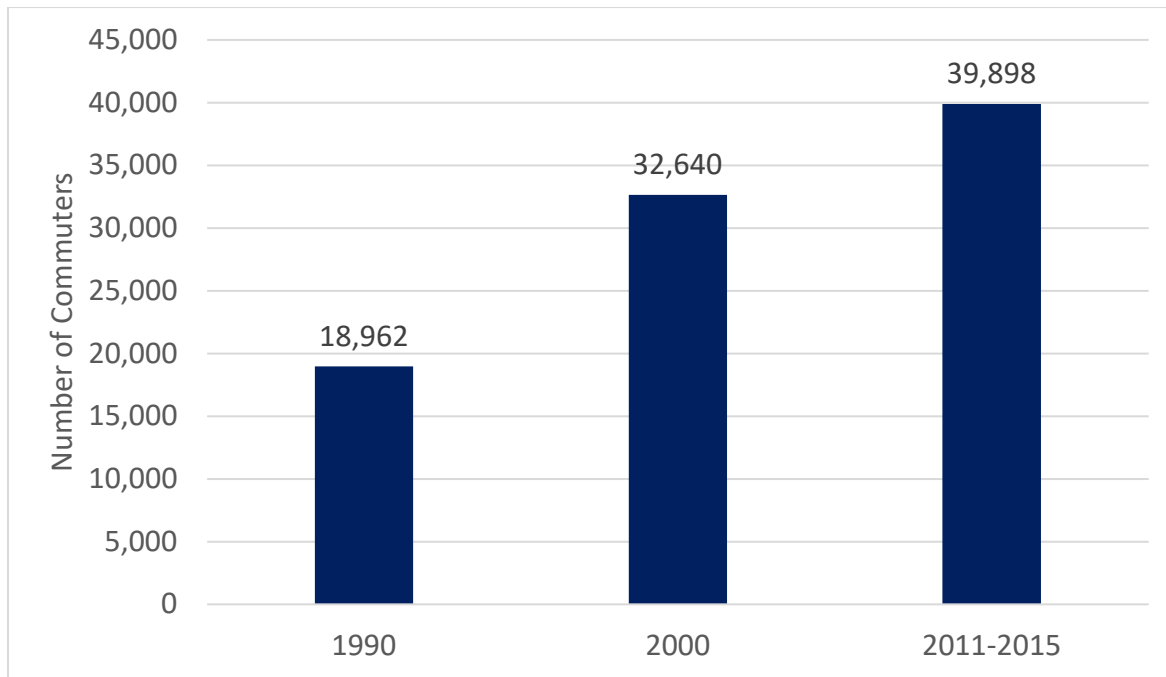
Figure 7: AMBAG Group Quarters Population in 2010

Source: U.S. Census Bureau, Census 2010

The AMBAG region, the state, and the nation all have about 2 residents per job, and that is expected to continue to 2045.

AMBAG residents commute to jobs outside the region, principally to jobs in Santa Clara County. This net out-commuting means there are residents in the region not connected to AMBAG region job growth. Net out-commuting surged between 1990 and 2000 as the “dot.com boom” pushed Silicon Valley (Santa Clara County) job levels higher, and has continued to rise as people to search for cheaper housing in portions of the AMBAG region. (See Figure 8.)

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Figure 8: Net Out-Commuting from AMBAG Region

Sources: 1990 & 2000 - Census Journey to Work and 2011-2015 - American Community Survey Special Tabulations for the Census Transportation Planning Package.

AMBAG Region Forecast Population Trends

As described above (see Table 5), the region is projected to add approximately 2,700 residents per year between 2015 and 2045. This is less than the average of just under 8,900 between 1990 and 2000 and above the recession-affected growth of 2,200 between 2000 and 2010. Recent growth from 2015-2020 has averaged 2,500 per year, close to the projected long-term growth rate.

Step 3: Housing and Households

The region is projected to add approximately 42,200 housing units by 2045, for a total of approximately 304,900 for an increase of 16 percent. The 2045 projected regional housing stock of 304,900 is slightly higher than the 305,293 housing units projected for year 2040 in the 2018 RGF, reflecting slower population growth.

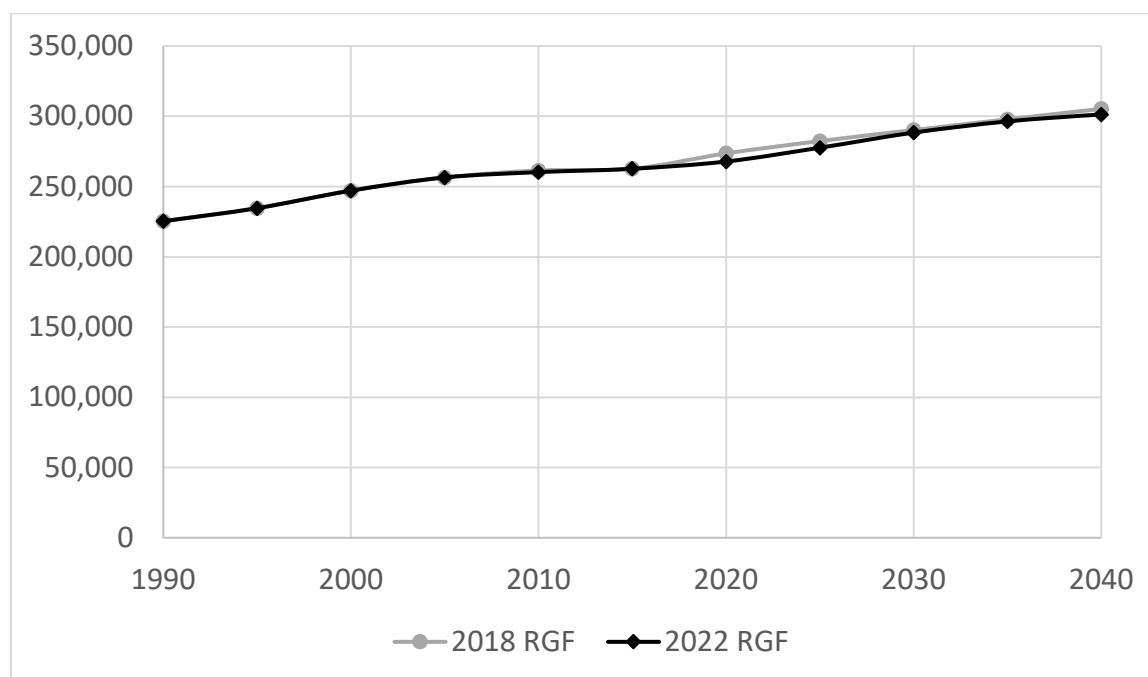
Table 6: Comparison of Forecasts for Housing

Forecast	2010	2015	2020	2025	2030	2035	2040	2045
2018 RGF	261,394	262,660	273,606	282,368	290,225	297,851	305,293	N.A.
% Change		0%	4%	3%	3%	3%	2%	N.A.
2022 RGF	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900
% Change		1%	2%	4%	4%	3%	2%	1%

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Sources: Data for years 2010-2020 are from the California Department of Finance. Forecast years were prepared by AMBAG and PRB.

Figure 9: AMBAG Region Housing Forecast



Sources: Data for 1990-2020 from the California Department of Finance. Forecast years were prepared by AMBAG and PRB.

Method for Producing the Housing Forecast

The housing forecast begins with a household forecast, and the household forecast is driven by demographic factors such as the size and structure of the population. Demographic factors (e.g., gender, age, and race/ethnicity) and external factors (e.g., major group quarters facilities like colleges and universities, correctional facilities, etc.) influence household population and household formation rates (i.e., the number of people per household). Household formation rates predict future demand for housing. That predicted demand, combined with expected vacancy rates, drives the forecast for housing growth.

AMBAG Region Forecast Housing Trends

As described above (see Table 5), the region is projected to add approximately 2,700 residents per year between 2015 and 2045. Taking average household size and vacancy rates into account, the resulting housing growth is expected to be just over 1,000 per year between 2015 and 2045. This is similar to the recent growth of 1,000 housing units per year between 2000 and 2015.

It is worth noting that several jurisdictions in the AMBAG region have historically had relatively high vacancy rates, reflecting a mix of vacation rentals and second homes, particularly in coastal

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communities. In recent years, there is some evidence that more homeowners may be participating in the vacation rental market via platforms such as Airbnb and VRBO. It is unclear whether these new services will result in higher vacancy rates as more housing units become primarily vacation rentals or lower vacancy rates as short-term rental units shift demand away from units that are intended to be available for rental most (or all) of the year. AMBAG will continue to monitor this trend for future forecasts.

Section 3: Development of the Subregional Forecast

Following the preparation of the regional forecast figures, AMBAG staff began the process of disaggregating the figures to the county and city level using historical data. This section summarizes that process and the results.

Summary of the 2022 Subregional Forecast

The 2022 RGF projects that the region will add about 65,500 jobs between 2015 and 2045, for a total of just over 442,800 jobs by 2045. Of that growth, 58 percent (approximately 38,200 jobs) is expected to be in Monterey County, 7 percent (approximately 4,500 jobs) is expected to be in San Benito County and 35 percent (approximately 22,800 jobs) is expected to be in Santa Cruz County.

This forecast projects that the region's population will grow by approximately 107,500 people between 2015 and 2045, for a total population of just under 869,800 in 2045. Of that growth, 57 percent (approximately 61,100 people) is expected to be in Monterey County, 23 percent (approximately 25,200 people) is expected to be in San Benito County and 20 percent (approximately 21,200 people) is expected to be in Santa Cruz County.

To house the region's expected population growth, this forecast shows an increase of just over 42,200 housing units by 2045, for a total of approximately 304,900 units. Of that growth, 62 percent (approximately 26,200 houses) is expected to be in Monterey County, 18 percent (approximately 7,500 houses) is expected to be in San Benito County and 20 percent (approximately 8,600 houses) is expected to be in Santa Cruz County. Housing growth rates do not exactly parallel population growth rates because of local variations in average household size and vacancy rate, and because some population (e.g., at UCSC and CSUMB) is expected to be housed in group quarters facilities.

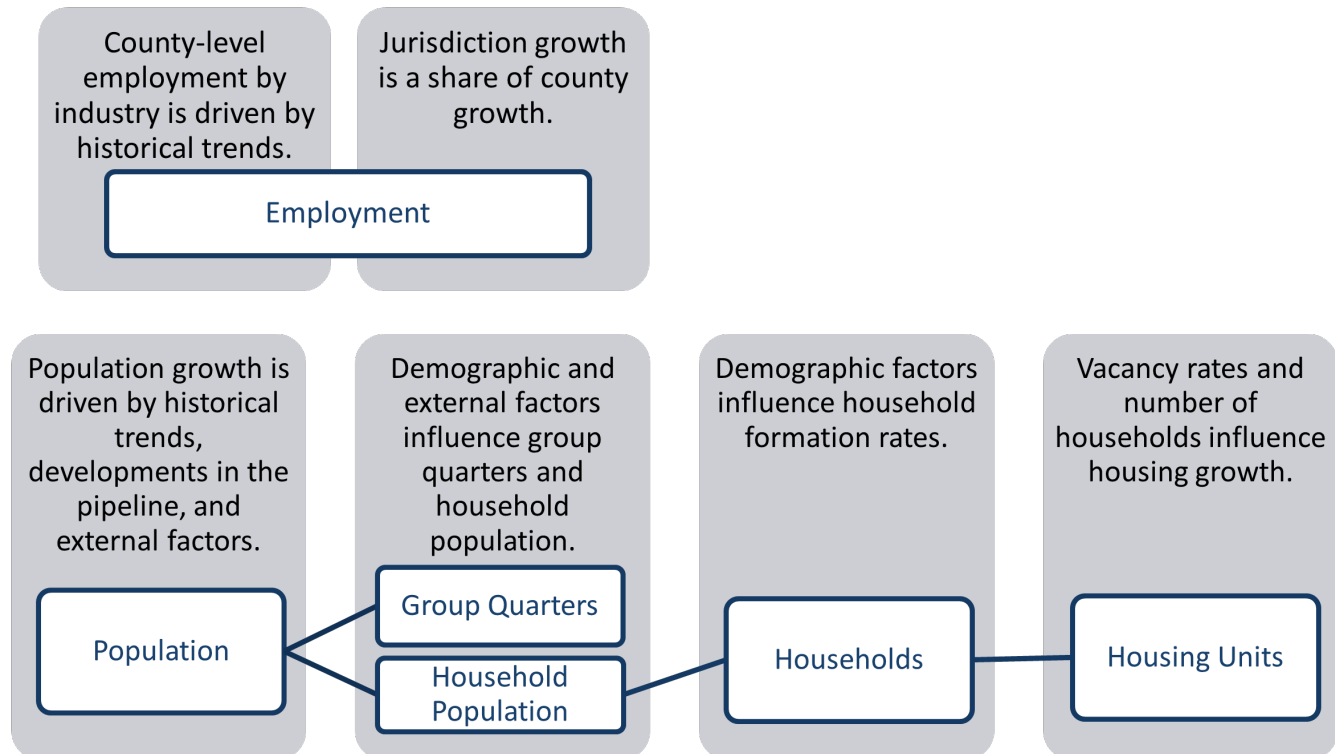
Details of the population, housing, and job growth forecasts for each jurisdiction, as well as population and housing forecasts for the two universities, can be found in Attachment 5.

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Subregional Allocation Methodology

Unlike the regional forecast, in which employment growth drives population and housing growth, the employment forecast is separate from the population and housing forecast in the subregional allocation. This separation reflects differing economic and demographic forces at the regional and local levels.

Figure 10: Subregional Allocation Process



1. **Employment trends:** Employment is measured as the number of jobs by place of work. For the county-level forecast, employment growth by industry is driven by historical trends (i.e., shift-share model). Total growth across the three counties is constrained by the region-level forecast. For each jurisdiction (cities and unincorporated balance of county), employment growth by industry is a constant share of the jurisdiction's parent county's growth in that industry.
2. **Population trends:** Population is the total resident population of the region. The jurisdiction level forecast is driven by three factors:
 - a. Historical trends (i.e., shift-share model)
 - b. Anticipated future developments such as housing projects under development that are likely to be occupied within the forecast horizon
 - c. External factors (e.g., universities, military, correctional facilities)

2022 Regional Growth Forecast

Each county's population forecast is a sum of the jurisdiction-level forecasts. All levels (county, city, unincorporated area) are constrained by the region-level forecast.

3. Household Population and Group Quarters: Household population is the population that lives in a housing unit. Group quarters population is the population that lives in a group living arrangement such as a dorm, barracks, correctional institution, or congregate care facility. Demographic factors (e.g., age, race/ethnicity) and external factors (e.g., major group quarters facilities like colleges and universities, correctional facilities, etc.) influence the household population and household formation rates (i.e., the number of people per household).
4. Households/Occupied Housing Units: A household is a person, or group of people, living in a house. Because a household, by definition, occupies a housing unit, households are equivalent to and synonymous with occupied housing units.
Household projections are driven by household formation rates. Household formation rates are calculated as the ratio of households divided by the household population. Household formation rates are the inverse of average household size.
5. Housing Units: Housing is the total number of housing units, including both occupied and vacant structures. Housing includes primary residences, second homes, accessory dwelling units, vacation rentals, farmworker housing, and any other habitable structure—including unauthorized units. The only type of dwelling excluded from the housing inventory is group quarters (dorms, barracks, congregate care, etc.).
Housing projections are driven by the household population projection, demographic characteristics of the household population (age, sex, race/ethnicity), household formation rates, and housing vacancy rates. Vacancy rates are calculated as the share of all units (including vacation rentals, unauthorized dwellings, etc.) that are not currently occupied.

Data sources include the California Department of Finance, the California Employment Development Department, InfoUSA, and the U.S. Census Bureau.

For more information on the definitions of housing and group quarters, see Attachment 4.

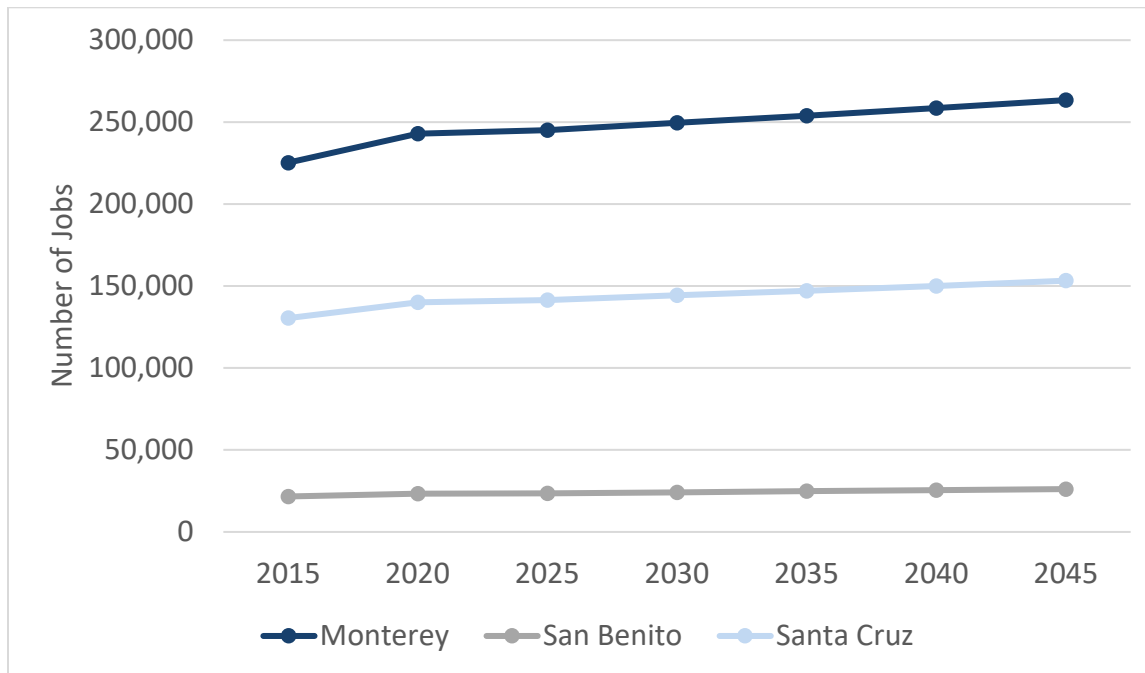
This process resulted in draft estimates at the jurisdictional level that were used for discussion purposes with staff at each of the cities and counties within the region. In addition to the cities and counties, staff met with the Local Agency Formation Commissions (LAFCOs) for each county, the Fort Ord Reuse Authority, the University of California, Santa Cruz (UCSC) and California State University, Monterey Bay (CSUMB) to discuss the results. Adjustments were made to the forecast based on these conversations to incorporate growth on the basis of planned developments, specific and General Plan research and economic development plans. The process of revision and meeting with local jurisdictions one-on-one was repeated several times to reach a consensus on the forecast.

2022 Regional Growth Forecast

Step 1: Employment

The 2022 RGF projects that the region will add about 65,500 jobs between 2015 and 2045, for a total of just over 442,800 jobs by 2045. Of that growth, 58 percent (approximately 38,200 jobs) is expected to be in Monterey County, 7 percent (approximately 4,500 jobs) is expected to be in San Benito County and 35 percent (approximately 22,800 jobs) is expected to be in Santa Cruz County.

Figure 11: Employment by County 2015-2045



Sources: California Employment Development Department, InfoUSA, AMBAG, forecast by PRB and AMBAG.

Method for Producing the County and Sub-County Employment Forecast

The subregional employment forecast incorporated a two-step process: a county-level forecast and a jurisdiction-level allocation.

In order to disaggregate the tri-county regional industry employment forecast by county, AMBAG staff selected what is known as a Classical Shift-Share model. The Classical Shift-Share formula is similar to the Implicit Shift-Share formula used to disaggregate the population forecast, except that it is comprised of three mathematical functions rather than two. In this case, they are referred to as the regional share, industry mix and competitive shift functions. The regional share function estimates what employment growth in a certain industry would look like in the local area (i.e., county) if it were to grow at the same rate as the total all-industry employment in the region as a whole. The second industry mix function then adjusts for the difference in the rate of employment growth in a certain industry, compared to all industry employment. The industry mix function is calculated using regional

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employment values. The third function, known as the competitive shift, adjusts the estimate to account for faster or slower industry employment growth in the county, compared to the region.

Figure 12: Classical Shift-Share Equation

$$E_i^{t+n} = E_i^t \left[\frac{R_A^{t+n}}{R_A^t} + \left(\frac{R_i^{t+n}}{R_i^t} - \frac{R_A^{t+n}}{R_A^t} \right) + \alpha \left(\frac{E_i^t}{E_i^{t-m}} - \frac{R_i^t}{R_i^{t-m}} \right) \right]$$

E = local Value R = Regional Value
 i = industry A = All industries

Sub-County Employment Database and Re-benchmarking

To produce the subregional employment component of the forecast and to support transportation modeling, AMBAG created an address-level database for all employers in the AMBAG region in 2015. The database combined industry employment data from the California Employment Development Department (EDD) with employer data from InfoUSA. The InfoUSA data are derived from dozens of sources including but not limited to postal records, white pages listings, new business registrations, utility connections, real estate data (deeds & assessments) and industry directories. The database is then verified and supplemented with regular phone surveys. InfoUSA database is used by many other regional Councils of Governments to conduct forecast work and is a reputable source of data.

Staff compared records from EDD with those from InfoUSA. Where both sources matched, one record was retained, unedited. Where records differed, staff conducted extensive research (using AMBAG's land use inventory, web-based investigation, and field research) to determine the proper industry code and employment level for the record and retained the most accurate record (typically the higher reported number). As a result of the editing and reconciliation process, the address-level inventory differs from EDD industry totals.

While there are differences across all industries, edits to agricultural records were extensive. Staff review of address-level records showed that many establishments listed as "agriculture" by EDD are, in the AMBAG region, engaged in food processing (manufacturing), storage (warehousing), or retail (farm stands). Agricultural recategorization is described in more detail in Attachment 2.

It is also important to note that the AMBAG estimate of agricultural jobs differs from estimates of the agricultural workforce (91,433 in 2016) described in "Farmworker Housing Study and Action Plan for Salinas Valley and Pajaro Valley." The reasons for this difference are both temporal and definitional. The industry estimates are annual-average estimates of jobs (a job is a paid position at a company) for 2015. The Farmworker Housing Study figures are 2016 estimates of all workers who were ever employed during the year, including those who worked part-time or part-year. If a company has high turnover or seasonal work, that company's number of workers (all year) would be higher than their average number of jobs. For example, if a company typically has 10 paid positions, but in peak season brings on another 10 for three months, the annual average number of jobs is 12.5 (10 x (9/12months) +

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$20 \times (3/12\text{months}) = 12.5/\text{month}$) but there were 20 unique workers at peak (original 10 plus additional 10).

Thus, in this case, the farmworker study estimates are higher than jobs estimates for three key reasons:

- Agricultural employment grew slightly between 2015 and 2016.
- Worker estimates take peak seasonal employment into account, while EDD industry estimates are annual averages.
- Some companies that identify as agricultural are more accurately classified as food processing (manufacturing), storage (warehousing), or retail (farm stands).

Sub-County Disaggregation Method for Employment

The address-level database, described above, was used to calculate the share of employment for each industry in each jurisdiction in 2015. This percent share was then carried forward to future years in order to calculate the number of jobs located in each jurisdiction by industry. While the County level totals use the Classical Shift-Share method as described above, the sub-county level forecast is a constant share approach. However, because the sub-county level forecasts are based on the County totals by industry the Classical Shift-Share method does influence the sub-county trends.

A preliminary draft forecast was distributed to planning staff at each jurisdiction. AMBAG staff held one-on-one meetings to gather comments and additional information from planning staff at each jurisdiction. (See Attachment 1 for a list of meeting dates, times, locations and attendees.) Staff then used economic studies, entitled development, the establishment of enterprise zones and other information from local planners to supplement the employment assumptions at the jurisdictional level. These comments and additional pieces of information were incorporated into the final forecast.

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Table 7: Subregional Employment Forecast

Geography	2015	2020	2025	2030	2035	2040	2045	Change 2015-2045	
								Numeric	%
AMBAG Region	377,335	406,280	410,017	418,132	425,845	434,147	442,824	65,489	17%
Monterey County	225,268	243,015	245,054	249,613	253,918	258,553	263,437	38,169	17%
Carmel-By-The-Sea	3,353	3,566	3,593	3,674	3,752	3,833	3,915	562	17%
Del Rey Oaks	705	748	753	774	794	815	834	129	18%
Gonzales	5,764	6,326	6,382	6,533	6,660	6,788	6,920	1,156	20%
Greenfield	7,227	7,882	7,948	8,061	8,177	8,298	8,423	1,196	17%
King City	7,573	8,195	8,248	8,371	8,511	8,669	8,832	1,259	17%
Marina	6,107	6,548	6,621	6,765	6,899	7,055	7,217	1,110	18%
Monterey	38,133	40,989	41,527	42,506	43,452	44,465	45,509	7,376	19%
Pacific Grove	7,470	8,016	8,061	8,152	8,244	8,343	8,445	975	13%
Salinas	73,009	78,874	79,577	81,079	82,505	84,044	85,683	12,674	17%
Sand City	1,966	2,092	2,102	2,151	2,188	2,224	2,259	293	15%
Seaside	9,667	10,476	10,589	10,833	11,062	11,290	11,543	1,876	19%
Soledad	8,532	9,010	9,079	9,161	9,235	9,333	9,462	930	11%
Unincorporated	55,762	60,293	60,574	61,553	62,439	63,396	64,395	8,633	15%
San Benito County	21,631	23,263	23,572	24,203	24,802	25,475	26,126	4,495	21%
Hollister	14,428	15,492	15,728	16,207	16,655	17,121	17,613	3,185	22%
San Juan Bautista	515	557	569	580	588	603	612	97	19%
Unincorporated	6,688	7,214	7,275	7,416	7,559	7,751	7,901	1,213	18%
Santa Cruz County	130,436	140,002	141,391	144,316	147,125	150,119	153,261	22,825	17%
Capitola	11,666	12,250	12,376	12,633	12,902	13,181	13,454	1,788	15%
Santa Cruz	40,840	43,865	44,317	45,594	46,863	48,203	49,636	8,796	22%
Scotts Valley	9,458	10,109	10,185	10,345	10,489	10,637	10,797	1,339	14%
Watsonville	26,403	28,514	28,765	29,156	29,505	29,896	30,303	3,900	15%
Unincorporated	42,069	45,264	45,748	46,588	47,366	48,202	49,071	7,002	17%

Sources: Data for 2015 from InfoUSA and the California Employment Development Department.

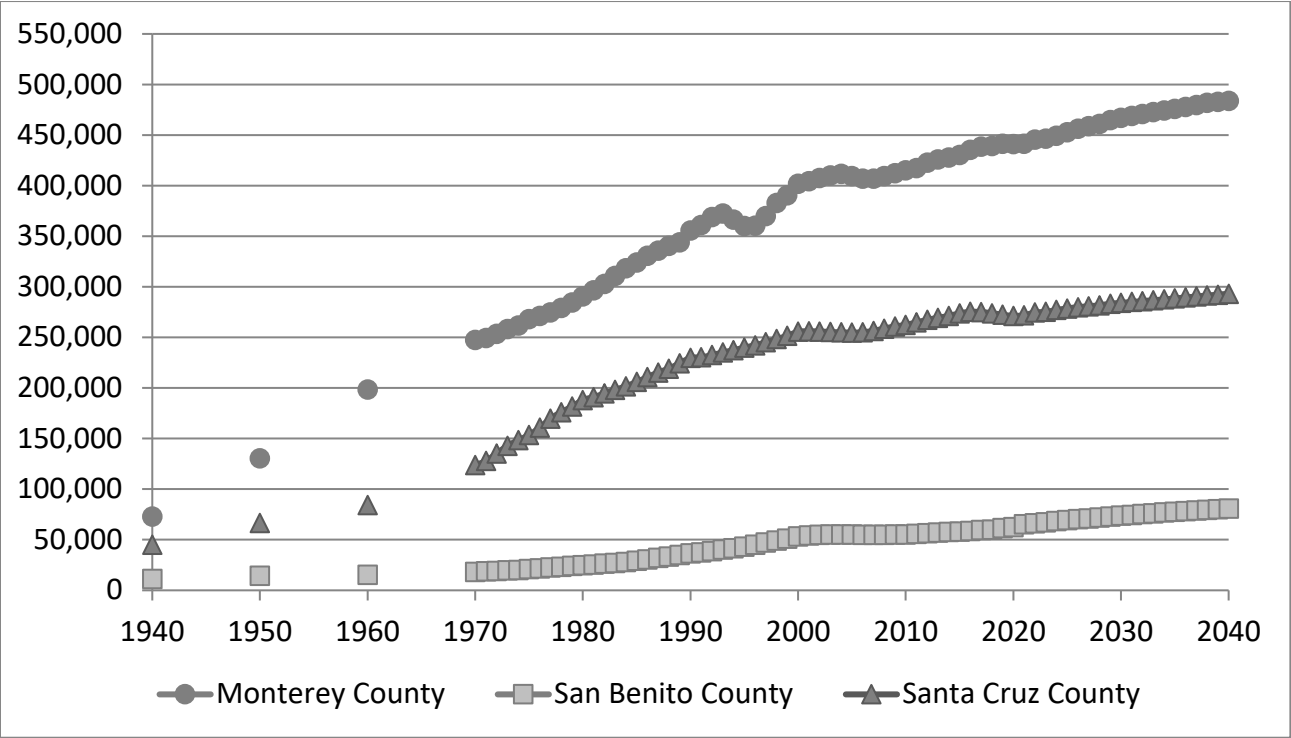
Forecast years were prepared by AMBAG and PRB.

Step 2: Population

This forecast projects that the region's population will grow by approximately 107,500 people between 2015 and 2045, for a total population of just under 869,800 in 2045. Of that growth, 57 percent (approximately 61,100 people) is expected to be in Monterey County, 23 percent (approximately 25,200 people) is expected to be in San Benito County and 20 percent (approximately 21,200 people) is expected to be in Santa Cruz County.

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Figure 13: Population in Monterey, San Benito and Santa Cruz Counties 1940-2045



Sources: Data for years 1940-2020 are from the U.S. Census Bureau and California Department of Finance. Forecast years were prepared by AMBAG and PRB.

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Table 8: Subregional Population Forecast

Geography	2015	2020	2025	2030	2035	2040	2045	Change 2015-2045	
								Numeric	%
AMBAG Region	762,241	774,729	800,726	824,992	842,189	857,828	869,776	107,535	14%
Monterey County	430,310	441,143	452,761	467,068	476,028	483,884	491,443	61,133	14%
Carmel-By-The-Sea	3,854	3,949	3,946	3,954	3,964	3,974	3,984	130	3%
Del Rey Oaks	1,663	1,662	1,693	1,734	1,859	2,330	2,650	987	59%
Gonzales	8,441	8,506	9,650	13,492	14,630	15,398	15,711	7,270	86%
Greenfield	17,172	18,284	19,342	19,734	19,961	20,202	20,433	3,261	19%
King City	13,736	14,797	15,376	16,101	16,689	16,881	17,064	3,328	24%
Marina	21,057	22,321	23,723	25,126	26,713	28,433	30,044	8,987	43%
Marina balance	20,037	21,371	22,293	22,841	23,238	23,768	24,237	4,200	21%
CSUMB (portion)	1,020	950	1,430	2,285	3,475	4,665	5,807	4,787	469%
Monterey	28,086	28,170	28,044	28,650	29,032	29,342	29,639	1,553	6%
Monterey balance	24,095	24,749	24,623	25,229	25,611	25,921	26,218	2,123	9%
DLI & Naval Postgrad	3,991	3,421	3,421	3,421	3,421	3,421	3,421	-570	-14%
Pacific Grove	15,460	15,265	15,290	15,395	15,530	15,676	15,817	357	2%
Salinas	158,059	162,222	166,226	170,459	173,393	175,358	177,128	19,069	12%
Sand City	361	385	430	516	756	1,012	1,198	837	232%
Seaside	33,815	33,537	34,497	35,107	35,634	36,582	38,316	4,501	13%
Seaside balance	25,835	26,345	27,285	27,850	28,317	29,205	30,881	5,046	20%
Fort Ord (portion)	4,163	3,083	3,083	3,083	3,083	3,083	3,083	-1080	-26%
CSUMB (portion)	3,817	4,109	4,129	4,174	4,234	4,294	4,352	535	14%
Soledad	24,597	25,301	26,112	26,824	27,697	28,419	29,133	4,536	18%
Soledad balance	16,298	17,190	18,001	18,713	19,586	20,308	21,022	4,724	29%
SVSP & CTF	8,299	8,111	8,111	8,111	8,111	8,111	8,111	-188	-2%
Unincorporated	104,009	106,744	108,432	109,976	110,170	110,277	110,326	6,317	6%
Unincorp balance	101,468	104,203	105,891	107,435	107,629	107,736	107,785	6,317	6%
CSUMB	2,541	2,541	2,541	2,541	2,541	2,541	2,541	0	0%
San Benito County	58,138	62,353	69,324	73,778	77,638	80,788	83,366	25,228	43%
Hollister	37,314	40,646	42,604	43,327	44,421	45,345	45,599	8,285	22%
San Juan Bautista	1,945	2,112	2,269	2,315	2,374	2,410	2,436	491	25%
Unincorporated	18,879	19,595	24,451	28,136	30,843	33,033	35,331	16,452	87%
Santa Cruz County	273,793	271,233	278,641	284,146	288,523	293,156	294,967	21,174	8%
Capitola	10,224	10,108	10,485	10,794	10,957	11,049	11,126	902	9%
Santa Cruz	64,223	64,424	68,845	72,218	75,257	78,828	79,534	15,311	24%
Santa Cruz balance	46,947	45,324	47,845	49,118	49,957	50,828	51,534	4,587	10%
UCSC	17,276	19,100	21,000	23,100	25,300	28,000	28,000	10,724	62%
Scotts Valley	11,946	11,693	11,718	11,837	11,867	11,868	12,010	64	1%
Watsonville	52,410	51,515	52,918	54,270	55,138	55,786	56,344	3,934	8%
Unincorporated	134,990	133,493	134,675	135,027	135,304	135,625	135,953	963	1%

Sources: Data for 2015-2020 are from the California Department of Finance. Forecast years were prepared by AMBAG and PRB.

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Method for Producing the County and Sub-County Population Forecast

In order to disaggregate the tri-county regional population forecast, PRB and AMBAG implemented the Implicit Shift-Share method. This particular technique was chosen because it provides a relatively simple, yet rigorous, method for estimating the future geographic distribution of the regional population based on historic estimates of local and regional population growth.

The Implicit Shift-Share formula is comprised of two distinct mathematical functions. These are sometimes known as the regional share and the local shift. The regional share function calculates what the total population growth in the local area (i.e., a city or county) would be if that area were to grow at the same rate as the region as a whole. The second function then adjusts for historic changes in the local area's share of the total regional population. Combined with an accurate estimate of the size of the base population obtained from the 2010 Decennial Census, the regional share and local shift functions provide a reasonable estimate of the future local area population, taking into account past changes in the percentage share of the regional population. Historical data are from the Department of Finance. The Department of Finance does benchmark their historical estimates to the Decennial Census for 1990, 2000 and 2010.⁴

Figure 14: Implicit Shift-Share Equation

$$E^{t+n} = E^t \left(\frac{R^{t+n}}{R^t} \right) + \alpha R^{t+n} \left(\frac{E^t}{R^t} - \frac{E^{t-m}}{R^{t-m}} \right) \quad \begin{array}{l} E = \text{Local Value} \\ R = \text{Regional Value} \end{array}$$

To produce jurisdiction-level forecast, AMBAG and PRB compiled a database of historical population by jurisdiction. This database included information on population growth (or decline) as well as details for “special” populations (e.g., college students, military personnel, prisoners). (Special populations are described in more detail in the section “Adjustments for Special Populations,” below.)

AMBAG and PRB compiled historical data⁵ to track trends in, and relied upon institutional/facility plans to produce the population forecast for the following areas:

- Marina:
 - Fort Ord (portion)

⁴ Department of Finance, E-8 Historical Population and Housing Estimates for Cities, Counties and the State, 1990-2000, August 2008; Department of Finance, E-4 Population Estimates for Cities, Counties and the State, 2001-2010, September 2011 and Department of Finance, E-1 Population Estimates for Cities, Counties and the State, 2011 and 2012, August 2009.

⁵ Sources include the California Department of Finance, U.S. Census Bureau and institutional records.

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- CSUMB (portion)
- Monterey
 - Defense Language Institute and Naval Postgraduate School
- Seaside
 - Fort Ord (portion)
 - CSUMB (portion)
- Soledad
 - SVSP & CTF
- Balance of County
 - CSUMB (portion)
- Santa Cruz
 - UCSC

AMBAG and PRB then applied the implicit shift-share methodology to the balance of population in each jurisdiction to produce a draft of the first forecast increment. The benchmark period for the shift-share model was 2010-2015, and the model was applied to produce the draft forecast.

Forecast years, for this initial draft, presumed that each jurisdiction maintained a constant share of the region's population. This approach, using shift-share for the first increment, and constant-share thereafter, was implemented in the 2014 RGF and 2018 RGF to ensure that jurisdictions that experienced population loss during the benchmark period would not continue to decline. This forecast assumption is reasonable given that any jurisdiction may experience a period of temporary population decline, even when the long-term trend has been stability or growth.

Further initial adjustments were made to reflect population growth associated with housing under construction or in the permit pipeline.

AMBAG staff then met with representatives from each jurisdiction to ground truth the forecast with respect to anticipated future growth and development in the pipeline. (See Attachment 1 for a full list of meetings.)

Step 3: Housing

To house the region's expected population growth, this forecast shows an increase of just over 42,200 housing units by 2045, for a total of approximately 304,900 units. Of that growth, 62 percent (approximately 26,200 houses) is expected to be in Monterey County, 18 percent (approximately 7,500 houses) is expected to be in San Benito County and 20 percent (approximately 8,600 houses) is expected to be in Santa Cruz County. Housing growth rates do not exactly parallel population growth rates because of local variations in average household size and vacancy rate, and because some population (e.g., at UCSC and CSUMB) is expected to be housed in group quarters facilities.

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Table 9: Subregional Housing Forecast

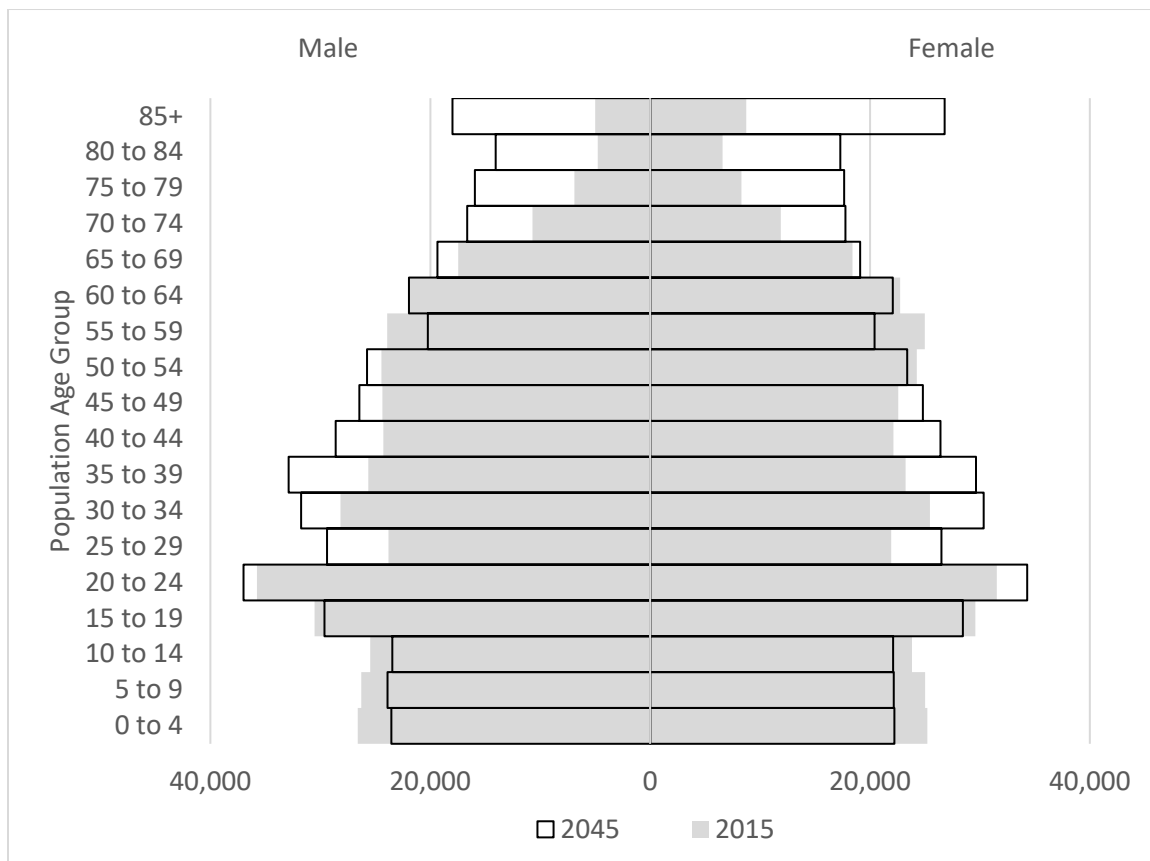
Geography	2015	2020	2025	2030	2035	2040	2045	Change 2015-2045	
								Numeric	%
AMBAG Region	262,660	267,812	277,645	288,386	296,352	301,307	304,900	42,240	16%
Monterey County	139,177	141,764	146,716	153,852	159,100	162,612	165,328	26,151	19%
Carmel-By-The-Sea	3,417	3,437	3,437	3,442	3,450	3,453	3,459	42	1%
Del Rey Oaks	741	741	762	809	848	1,052	1,195	454	61%
Gonzales	1,987	1,987	2,399	3,630	4,182	4,474	4,626	2,639	133%
Greenfield	3,794	3,981	4,359	4,766	5,047	5,164	5,238	1,444	38%
King City	3,283	3,432	3,672	4,002	4,282	4,356	4,403	1,120	34%
Marina	7,334	7,784	8,277	8,837	9,265	9,521	9,693	2,359	32%
Marina balance	7,334	7,784	8,277	8,832	9,205	9,445	9,617	2,283	31%
CSUMB (portion)	0	0	0	5	60	76	76	76	--
Monterey	13,637	13,705	13,705	13,920	14,209	14,402	14,549	912	7%
Monterey balance	13,205	13,273	13,273	13,488	13,777	13,970	14,117	912	7%
DLI & Naval Postgrad	432	432	432	432	432	432	432	0	0%
Pacific Grove	8,184	8,201	8,214	8,267	8,336	8,400	8,463	279	3%
Salinas	43,001	43,411	45,552	48,673	50,968	52,229	53,150	10,149	24%
Sand City	176	189	198	228	333	446	526	350	199%
Seaside	10,913	10,920	11,437	11,925	12,248	12,604	13,192	2,279	21%
Seaside balance	8,908	8,942	9,429	9,888	10,190	10,531	11,107	2,199	25%
Fort Ord (portion)	1,119	1,119	1,119	1,119	1,119	1,119	1,119	0	0%
CSUMB (portion)	886	859	889	918	939	954	966	80	9%
Soledad	3,927	4,137	4,433	4,733	5,024	5,240	5,426	1,499	38%
Soledad balance	3,927	4,137	4,433	4,733	5,024	5,240	5,426	1,499	38%
SVSP & CTF	0	0	0	0	0	0	0	0	--
Unincorporated	38,783	39,839	40,271	40,620	40,908	41,271	41,408	2,625	7%
Unincorp balance	38,783	39,839	40,238	40,569	40,592	40,616	40,616	1,833	5%
CSUMB	0	0	33	51	316	655	792	792	--
San Benito County	18,262	19,913	21,721	23,333	24,773	25,452	25,775	7,513	41%
Hollister	10,757	11,917	12,501	13,177	13,701	14,054	14,122	3,365	31%
San Juan Bautista	750	819	878	918	951	965	975	225	30%
Unincorporated	6,755	7,177	8,342	9,238	10,121	10,433	10,678	3,923	58%
Santa Cruz County	105,221	106,135	109,208	111,201	112,479	113,243	113,797	8,576	8%
Capitola	5,537	5,554	5,786	5,970	6,009	6,017	6,017	480	9%
Santa Cruz	23,535	23,954	24,988	25,578	25,974	26,295	26,525	2,990	13%
Santa Cruz balance	23,005	23,424	24,422	24,970	25,342	25,663	25,892	2,887	13%
UCSC	530	530	566	608	632	632	633	103	19%
Scotts Valley	4,691	4,739	4,798	4,846	4,869	4,887	4,930	239	5%
Watsonville	14,131	14,226	14,829	15,629	16,108	16,347	16,519	2,388	17%
Unincorporated	57,327	57,662	58,807	59,178	59,519	59,697	59,806	2,479	4%

Sources: Data for 2015-2020 are from the California Department of Finance. Forecast years were prepared by AMBAG and PRB.

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Method for Producing the County and Sub-County Housing Forecast

In order to convert county level population forecast figures into the forecast of housing units, staff created a set of demographic profiles that describe the age, sex, race, and ethnicity characteristics of the future population. The basis for the demographic profiles is a set of detailed population projections developed by the California Department of Finance in 2019.⁶ The profiles were developed by calculating the share of total projected population within each county that may be attributed to each age, sex, race and ethnic category. The population age distribution for the AMBAG Region is shown in Figure 15 below. County-specific demographic patterns from the Department of Finance forecast were applied to AMBAG-projected total population for each county.

Figure 15: Population Size and Age Structure of AMBAG Region in 2015 and 2045

Source: 2015 data from the California Department of Finance, 2045 data from AMBAG and PRB.

⁶ In January 2020, DOF published State and County Population Projections. These have not been re-benchmarked to the 2020 Census.

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The first step toward translating the county demographic projections into forecasted housing was to subtract the group quarters population from the total population. (For an explanation of Group Quarters, see Attachment 4.) Staff calculated a set of group quarters rates by dividing the group quarters population in each age, sex, race and ethnic category as provided by the 2010 Census⁷ by the total 2010 age, sex, race and ethnic population in each county. The team then updated these 2010 rates to reflect 2020 population and group quarters population estimates from the Department of Finance. In order to estimate the group quarters population in each county, staff multiplied the group quarters rates within each category by the total population in each category. This population was then removed from the total population to provide an estimate of the number of people living in households, by demographic subgroup.

Next, to generate estimates of the total number of households in each county, staff calculated a set of head of householder rates. These also are frequently referred to as “headship rates” or “household formation rates.” As with the group quarters rates, these are derived from 2010 Census data.⁸ To generate the head of householder rates, staff divided the 2010 estimates of the number of individuals within each age, race and ethnic category who were reported to be the head of a household by the total number of individuals within each age, race, and ethnic population category less the group quarters population.⁹ By multiplying the base-year household population estimates for each category by the head of householder rates, staff derived a new set of head of household estimates, which were controlled to published data from the California Department of Finance. Note that for each head of household there is, by definition, one household. Thus, by adding up all of the head of householders, the staff was able to generate estimates of the total number of households within each county.¹⁰

Finally, vacant units were added to the total number of households in order to obtain an estimate of housing units. Vacancy data was obtained from the U.S. Census Bureau for 1990, 2000 and 2010, and

⁷ U.S. Census Bureau, 2010 Decennial Census, Summary File 1, Table QTP-12.

⁸ U.S. Census Bureau, 2010 Decennial Census, Summary File 2, Table PCT-12.

⁹ The householders data for the "Some other race alone, not Hispanic or Latino" and "Native Hawaiian and Other Pacific Islander alone, not Hispanic or Latino" categories of population in San Benito County was suppressed because there was not a population of greater than 100. For these ethnic categories the regional rate was used instead given the lack of data on this population.

¹⁰ The Census does include "second dwelling units" or accessory units within their counts of households if the unit has its own bathroom and kitchen facilities. However, there are likely illegal "granny units" that are not counted through this process.

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from the Department of Finance for intercensal years.¹¹ To better understand what a normal housing vacancy rate might be, staff reviewed historical data on residential vacancy for the last two decades. Once a vacancy rate was established, this was used to calculate the total number of vacant housing units (the number of occupied units being equal to the number of households). By adding together estimates of the total number of vacant and occupied housing units, staff derived estimates of the total housing stock within each county.

Forecasting Sub-County Population, Households and Housing Units

To derive a city-level forecast of population, household population, households, and housing units, staff used a simplified version of the methodology described above. The MPO is not required to develop detailed demographic characteristics for city-level estimates. As such the household and housing unit conversion was done using aggregate group quarters and household formation rates for each city, as reported in the 2010 Census and with trends through 2020 from the Department of Finance.¹² Vacancy rates were derived from a 30-year average as reported by the Department of Finance.¹³ The Department of Finance does benchmark their estimates to the decennial Census.

Some of the jurisdictions within the region show a declining population over the last 10 to 20 years. Because the Implicit Shift-Share method was used for projecting 2025 population and the method reflects the change in population over time, for those jurisdictions that have experienced population decline there would be a continuation of that decline reflected for the year 2025. Instead of showing a decline, the 2025 share of the regional population calculated for these jurisdictions was held constant. This has the effect of showing an increase in population to 2025 even if recent trends were toward population decline. There is too little information to know whether short-term declines will continue, so instead of assuming continual decline, growth was held at a constant. AMBAG will continue to monitor these trends.

¹¹ Department of Finance, E-8 Historical Population and Housing Estimates for Cities, Counties and the State, 1990-2000, August 2008; and Department of Finance, E-5 Population and Housing Estimates for Places, 2001-2010, with 2000 Benchmark, September 2011.

¹² U.S. Census Bureau, 2010 Decennial Census, Summary File 1, Tables QTP-12 and PCT-12.

¹³ Department of Finance, E-8 Historical Population and Housing Estimates for Cities, Counties and the State, 1990-2000, August 2008; Department of Finance, E-4 Population Estimates for Cities, Counties and the State, 2001-2010, September 2011 and Department of Finance, E-5 Population Estimates for Cities, Counties and the State, 2010-2016, July 2016.

Section 4: Demographic History of the AMBAG Region

The AMBAG region grew at a faster rate than California in the 1960s and 1970s and grew at approximately the same rate as the state in the 1980s (24% in AMBAG region, 26% statewide). Both the state and the AMBAG region grew at the same rate in the 1990s (14%). The AMBAG region's growth fell far below the statewide average between 2000 and 2010, increasing by only three percent while the state grew by 10 percent. From 2010 to 2020 both the state and the AMBAG region grew at similar rates (7% and 6%, respectively).

AMBAG Region: 1970 to 1990

Between 1970 and 1990 the AMBAG region population grew by more than 110,000 each decade, increasing by 29 percent from 1970 to 1980 and by 24 percent from 1980 to 1990. Growth slowed in the 1990s. The slowdown can be attributed, in part, to the closure of Fort Ord in 1994, which is described in more detail in the "Adjustments" section, below. These population losses greatly affected the growth rates of the communities of Marina and Seaside prior to 2000. Concurrent civilian job losses affected population growth in the AMBAG region more broadly. The AMBAG region population grew by 88,500 (14%) between 1990 and 2000.

AMBAG Region: 2000 to 2010

In the following decade, population growth slowed considerably. The AMBAG region population grew by only 22,100 (3%) during the decade between 2000 and 2010. This pattern of slowing population growth reflects an aging population and lower net migration into the AMBAG region. Lowered net migration could be due to several factors including but not limited to water resource constraints, the after-effects of the closure of Fort Ord, as well as increasing housing costs followed by a major recession.

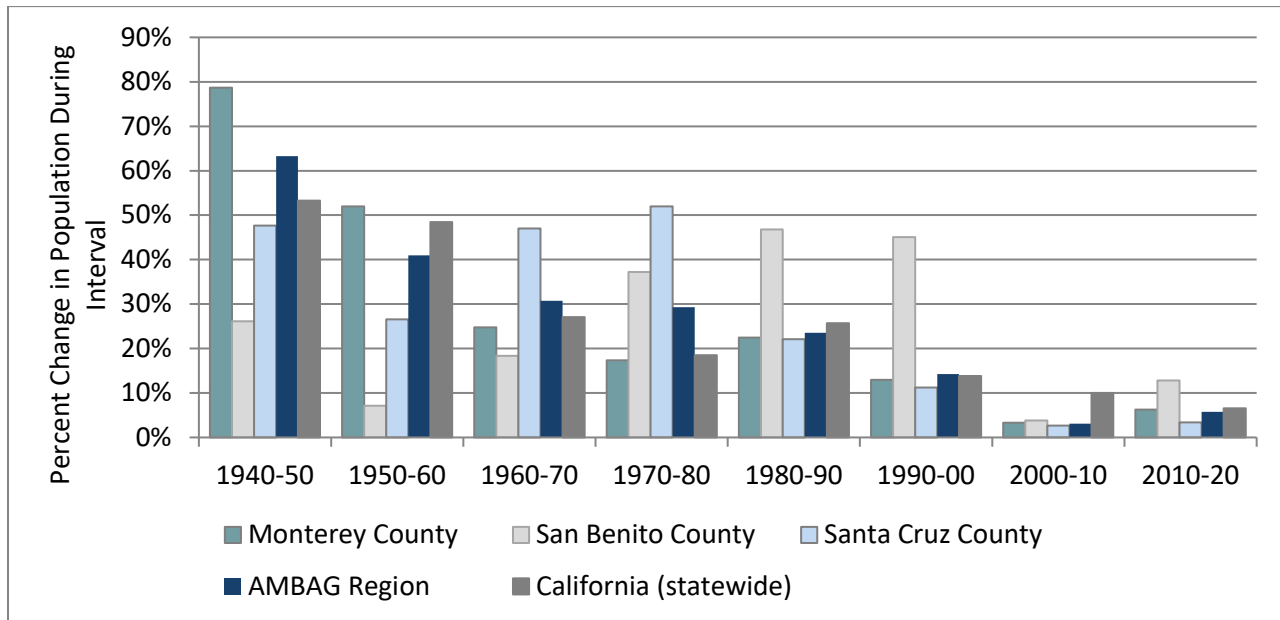
AMBAG Region: 2010 to 2020

In the five years since the decennial census, population growth began to return to historical levels. The AMBAG region population grew by just over 42,000 (6%) during the period between 2010 and 2020. This recovery in population growth reflects post-recession recovery.

Demographic History of AMBAG Counties

Population growth details for all three counties are shown below. County-specific summaries follow the charts.

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Figure 16: Population Growth Rates in Monterey County, San Benito County, Santa Cruz County, AMBAG Region and California (statewide) 1940-2020

Source: California Department of Finance

Monterey County

Between 1960 and 2000, Monterey County has grown at a rate slower than the AMBAG region as a whole. From 2000-2010 and 2010-2020 Monterey County grew at the same rate in the region. (See Figure 16, above.)

As a result of the closure of Fort Ord, Monterey County experienced a population decline in the middle of the 1990s, yet population growth rebounded later in the decade. The county registered 13 percent growth (an increase of 46,100) between 1990 and 2000. (See Figures 2 and 3)

The 1990s also saw the opening of two large institutions: California State University, Monterey Bay and Salinas Valley State Prison. Both are described in more detail in the Special Populations section below.

While the County as a whole grew, six of the county's thirteen jurisdictions experienced population loss during the 1990s (Carmel-By-The-Sea, -4%; Del Rey Oaks, -1%, Marina, -29%, Monterey, -7%, Pacific Grove, -4%, Seaside, -15%). Conversely, the population of Salinas grew by nearly 34,000 during the decade. Soledad also grew at a rapid clip (16,000 population) largely as the result of Salinas Valley State Prison opening in 1996.

The following decade saw much slower growth, with an increase of less than 13,300 (3%) between 2000 and 2010. Five jurisdictions lost population (Carmel-By-The-Sea, -9%; Del Rey Oaks, -2%,

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Monterey, -6%, Pacific Grove, -3%, unincorporated Monterey County, -1%). The city of Seaside remained virtually unchanged.

From 2010 to 2020, the cities of Greenfield, King City, Marina, and Sand City all had estimated growth of greater than 10 percent. Only the city of Soledad is estimated to have lost population.

San Benito County

While San Benito County grew at a rate much slower than the AMBAG region prior to the 1970s, the county saw rapid population growth in the 1970s, 1980s, and 1990s, a dip in the early 2000s, and a return to rapid growth 2010-2020. (See Figure 16, above.)

San Benito County registered rapid population growth, adding more than 16,500 population (45%) between 1990 and 2000. During this decade the city of Hollister nearly doubled in population (78%) while the population of San Juan Bautista declined (-1%).

San Benito's population growth slowed to four percent (2,000 population) between 2000 and 2010. The trend of the 1990s was reversed. Hollister grew by only one percent while San Juan Bautista increased by 20 percent.

From 2010 to 2020 San Benito County grew faster than the region, with Hollister and San Juan Bautista growing by 16% and 13%, respectively.

Santa Cruz County

Santa Cruz County grew at a rate faster than the AMBAG region in the 1960s and 1970s, but grew more slowly in every other decade from 1940-2020. (See Figure 16, above.)

Santa Cruz County grew by more than 25,800 (11%) between 1990 and 2000. The fastest-growing jurisdiction in Santa Cruz County between 1990 and 2000 was Watsonville (42%) followed by Scotts Valley (31%). Capitola's population fell during the decade (-1%).

The County's growth slowed considerably, adding just under 6,800 population (3%) between 2000 and 2010. The fastest-growing jurisdiction in Santa Cruz County between 2000 and 2010 was Watsonville (16%, including the annexation area, 11% without) followed by Santa Cruz (10%). Scotts Valley, which grew rapidly during the 1990s, showed only two percent population growth during the decade. Capitola's population fell during the decade (-1%).

In recent years, no jurisdiction in Santa Cruz has grown by more than 10 percent. The fastest growing city, Santa Cruz, grew by 7% between 2010 and 2020.

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Adjustments for Special Populations

In small area demographic analysis, some populations grow or decline as a result of exogenous factors, rather than in response to demographic or economic conditions. For example, uniformed military populations, college populations, and prison populations may grow or decline as new facilities are added or older facilities are phased out of use. These population changes involve facilities that are outside the authority of local land use agencies and that change based on policy, rather than demographic, factors.

Changes in these facilities can result in population “shocks” that affect the rate of population change within an area, independent of larger demographic and economic trends.

As a result of their unique characteristics, these populations are referred to as “special populations” and are often treated separately in forecasting.

Special populations include people associated with military bases, tourists, prisons, and colleges and universities. The size of a special population may have no connection to the general trends affecting the area. A special population can be stable for long periods of time, balloon quickly, and deflate, or, in the case of military bases, disappear rapidly through a closure program. It is best to develop a detailed understanding of the nature of the special population and set out the projection for it separately.¹⁴

Over the past two decades, the AMBAG region has been home to several “special populations” including the military resident population at Fort Ord, the Defense Language Institute and Naval Postgraduate School, students at UCSC and CSUMB, and inmates at SVSP.

In the preliminary forecast, AMBAG staff began the shift-share analysis at 1996 to address the population “shocks” resulting from the closure of Fort Ord and the opening of both California State University Monterey Bay and the Salinas Valley State Prison. While this adjustment was effective at addressing some of the special population concerns, it has a key weakness: it does not allow for independent forecasting of special populations.

The following discussion provides a method for addressing that issue.

¹⁴ Merc, Stuart. “Projections and Demand Analysis.” Planning and Urban Design Standards. published by the American Planning Association. Sept 2012.
<http://books.google.com/books?id=NXpncFYj73QC&pg=PA299&lpg=PA299&dq=%22special+population%22+forecasting&source=bl&ots=L2fSbUMT8R&sig=uV05NN3-rNYcpCr97xU2hTpYt6s&hl=en&sa=X&ei=eEC5UMT8O42tqAGAvIDQCQ&ved=0CG0Q6AEwCQ#v=onepage&q=%22special%20population%22%20forecasting&f=false>

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History of Special Populations in the AMBAG Region***Fort Ord***

Established in 1917, Fort Ord was eliminated during the Base Realignment and Closure Act of 1990, closing in 1994. This resulted in the loss of more than 30,000 residents in Monterey County, primarily in the jurisdictions of Marina and Seaside, as described in the Fort Ord Reuse Plan:

*Fort Ord has been a significant presence in Monterey County since 1917... maintained a large military population numbering approximately 14,500 military personnel and 17,000 family members of active-duty personnel... the resident population of Fort Ord totaled 31,270 in 1991.*¹⁵

In addition...

*The on-post resident population was divided between the two municipalities of Marina and Seaside. Through 1990, 17,139 people (56%) were within the Seaside city limits and 13,321 people (44%) were within the Marina city limits (Harding Lawson Associates, 1991, Workplan remedial investigation/feasibility study, Fort Ord, CA).*¹⁶

These population losses greatly affected the communities of Marina and Seaside. However, the forecast was developed using the 2000 to 2015 time period as a historical reference. By 2000 abnormalities in growth rates caused by the closure of Fort Ord had self-corrected. The Fort Ord Reuse Authority's mandate for overseeing the area ended in June 2020. Beginning with the 2022 RGF, the area will be projected as any other potential development in the AMBAG region, based on plans and permits.

Defense Language Institute and Naval Postgraduate School

The Army Language School, later renamed the Defense Language Institute, has been a presence in Monterey County since the end of World War II. The number of people living in group quarters at the Institute and Postgraduate School has been stable, at approximately 4,000, in recent years. Because of this stability, the 2018 RGF presumes no change to the population of these two institutions in future years.

¹⁵ Fort Ord Reuse Plan, Volume 1: Context and Framework. June 1997.

¹⁶ Fort Ord Reuse Plan, Volume 2: Reuse Plan Elements. June 1997.

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University of California, Santa Cruz

Founded in 1965, the University of California, Santa Cruz grew to 9,800 students by the 1991-92 academic year, 10,885 students by the 1999-2000 academic year, and 16,300 full-time equivalent students in the 2009-2010 academic year.¹⁷ In meetings with AMBAG staff, UCSC staff indicated that they expect growth of 300-500 students per year, resulting in a 2040 student forecast of 28,000 (the 2022 RGF holds this level constant from 2040-2045).

It is important to note that these projections reflect full-time equivalent students, and actual headcounts will likely be higher.

California State University, Monterey Bay

Founded in 1995, California State University Monterey, Bay grew to 2,265 students during the 1999-2000 school year and 4,000 students by 2010.¹⁸ Although not created by the Fort Ord Reuse Plan, the University is a significant component of the Base Reuse Plan and as it continues to grow will help to stimulate the economic development of the Fort Ord Area. The most recent master plan projects full-time equivalent student enrollment of 12,000 by 2025.¹⁹ In meetings with AMBAG staff, CSUMB staff indicated that they expect growth to 12,700 full-time equivalent students by 2045.

It is important to note that these projections reflect full-time equivalent students, and actual headcounts will likely be higher.

In addition, discussions with CSUMB staff suggested that some group quarters (student) dormitory housing in the “East Campus” unincorporated area would convert to faculty/family housing over time. This transition is reflected through the growth of group quarters population in the Marina area of the CSUMB campus, decline of group quarters in Unincorporated Monterey County—and transition of those formerly group quarters structures into family housing (i.e. increase in households and housing units).

¹⁷ University of California, Santa Cruz Department of Planning and Budget.

<http://planning.ucsc.edu/irps/thirdWeek.asp> accessed December 2012. Figures based on 3-quarter average measured in the spring quarter of the academic year.

¹⁸ California State University Monterey Bay historical timeline <http://about.csumb.edu/node/4287> accessed November 2012.

¹⁹ Recirculated Draft Environmental Impact Report for the California State University Monterey Bay 2007 Master Plan. July 2008.

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Salinas Valley State Prison and Soledad Correctional Training Facility

Opened in 1996, Salinas Valley State Prison has a design capacity of 3,888.²⁰ According to annual reporting by the California Department of Finance, the facility had a resident population of 4,100 at the beginning of the 2000s decade and a population of 3,630 on January 1, 2010.²¹ The facility has a maximum capacity of 4,400, according to the 2010 Master Plan Annual Report.²²

Opened in 1946, Soledad Correctional Training Facility has a design capacity of 3,301. According to annual reporting by the California Department of Corrections and Rehabilitation and counts from the 2000 and 2010 decennial census, the facility had a resident population of between 6,000 and 7,200 during the decade.²³

Because both facilities currently house group quarters populations in excess of their design capacity, no future population growth is shown at these facilities in the 2018 RGF. Population totals are held constant at their 2015 levels.

Table 10: Historical Special Population Counts

	1990	2000	2010	2015
Fort Ord Military Population	31,270*	0	0	0
Defense Language Institute and Naval Postgraduate School	n/a	n/a	4,227	4,004
University of California, Santa Cruz	9,800**	10,885	16,332	17,276
California State University, Monterey Bay	0	2,265	4,000	6,368
Salinas Valley State Prison	0	4,100	3,630	3,592
Soledad Correctional Training Facility	0	7,120	6,148	4,707

* *Estimate.*

**1990 figure for University of California, Santa Cruz reflects data from the 1991-92 academic year, the earliest year reported.

²⁰ California Department of Corrections and Rehabilitation website for Salinas Valley State Prison. Figure reported for fiscal year 2009-2010. http://www.cdcr.ca.gov/Facilities_Locator/SVSP-Institution_Stats.html accessed December 9, 2012.

²¹ California Department of Finance. Exclusion and Dorm Report. November 2012.

²² Master Plan Annual Report: Calendar Year 2010. California Department of Corrections and Rehabilitation. January 2011.

²³ California Department of Corrections and Rehabilitation website for Soledad Correctional Training Facility. Figure reported for fiscal year 2007 http://www.cdcr.ca.gov/Facilities_Locator/CTF-Institution_Stats.html accessed December 9, 2012. Population counts derived from institutionalized group quarters counts from Census 2000 and Census 2010, U.S. Census Bureau.

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Adjustments to the Population Projections***Developing Special and Non-Special Population Estimates***

Special populations provide a challenge to the population projections because their growth and decline are often not determined by factors that impact the rates of change of the general population. This is particularly true of college students, prison inmates, and military personnel and their dependents. Residents of nursing homes, while also a special population, share many of the characteristics of the general population, and their growth and decline often mirror the demographic changes of the larger community. To deal with the special population issue, a common procedure applied in population projections is to exclude the special populations by using group quarters data and to project the adjusted population separately, i.e., the total population minus the special population. At the end of the projection module, the special population is added back to the projected adjusted population to produce the projected total population. The special population is either held constant or projected separately.²⁴

Thus, projections for AMBAG jurisdictions (Marina, Santa Cruz, Seaside, Soledad and unincorporated Monterey County) should be adjusted to account for special populations independent of the non-special population trends.

To accomplish this, special populations should be subtracted from the census year population estimates used in developing the shift-share model population shares. Independent projections of the special populations (e.g., from master plan documents) should then be addressed separately in the population forecast.

Incorporating Special Populations into the Final Projections

As noted above, Fort Ord has closed, and thus major military populations can be assumed to be constant throughout the remainder of the forecast.

For the universities and the prison, master plan documents provide useful information about expected future populations. These population plans can be used to fill in horizon-year projections, which are then kept constant for any remaining years of the AMBAG forecast. Additionally, staff worked closely with UCSC to develop conservative estimates for growth after the horizon year of their long-range development plan.

²⁴ Rayer, Stephan. MISER Population Projections for Massachusetts, 2000–2020. July 2003.
<http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&cad=rja&ved=0CEUQFjAD&url=http%3A%2F%2Fwww.umass.edu%2Fmiser%2Fpopulation%2FDocuments%2FMAProjMethodology.doc&ei=-ke5UNPKDMmdggH0h4GgDQ&usg=AFQjCNF6tP0wQ9CqtSb8X7-UtMm9rmMrw&sig2=8pz3atGy03rNWjtvjbdjeg>

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Translating Population Growth into Housing

Special population adjustments for Fort Ord require no special processing, as the military population on Fort Ord is not expected to change in future years.

However, university populations for UCSC and CSUMB pose a special case. While housing will be provided by the universities, it is likely that many students will live in group quarters (described in more detail in Attachment 4), but at least some students will reside in housing “in town” as part of the resident population of surrounding jurisdictions. For this reason, university population projections and housing projections were completed separately from the jurisdiction population projections.

Population projection adjustments for SVSP and SCTF require no special processing for housing unit projections. These populations will be classified as group quarters, and thus are not considered in housing calculations.

Adjustments for Annexations

The shift-share approach outlined above presumes that most population change is a result of demographic and economic forces that can be represented by the rate of change over time. The shift-share approach is intended for use with jurisdictions that retain consistent geographic boundaries over time. Because the shift-share method presumes constant geographic boundaries, annexations, which by definition change jurisdiction boundaries, pose a unique problem. Adjustment techniques are needed to address these cases. Between 1990 and 2010 there was one heavily populated annexation in the AMBAG region. This case, the Watsonville annexation, is described in more detail below. (In 2008 Salinas also annexed the North of Boronda Future Growth Area, which had a population of approximately 100. This annexation, which affected the overall jurisdiction population by less than 0.1%, was not modeled separately.)

History of Annexations in the AMBAG Region

In 2000 the city of Watsonville annexed a portion of unincorporated Santa Cruz County. Known as the Freedom-Carey annexation, the change was recorded in July 2000, after the 2000 decennial Census.

Historical population estimates for the City of Watsonville, unincorporated Santa Cruz County and Freedom-Carey annexation area are shown in Table 11 below.

The data for 2000 reflect reports published by the Local Agency Formation Commission with respect to the annexation area. Data for 1990 were derived using trend extrapolations based on the rate of growth in associated census tracts (1106 and 1107). Similarly, data for 2010 were derived using trend extrapolations based on the rate of growth in associated census tracts (1105.02, 1106 and 1107).

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If the annexation of 2,022 residents were simply attributed to the population growth of Watsonville between 2000 and 2010, it would account for forty percent of the growth in the city's population during that period of time. Conversely, the loss of the annexed population would account for more than half of the decline in unincorporated population between 2000 and 2010.

Since the shift reflects an administrative boundary change, not a demographic one, the shift-share model was adjusted accordingly.

Table 11: Historical Population Estimates for the Watsonville Annexation Area

	1990	2000	2010
City of Watsonville	31,099	44,246	51,199
Excluding Annexation Area	31,099	44,246	49,229
Unincorporated County of Santa Cruz	130,086	135,345	129,739
Excluding Annexation Area	128,426	133,323	129,739
Annexation Area	1,660	2,022	1,970

Sources: Analysis by PRB of data from the U.S. Census Bureau.

Adjusting the Watsonville and Unincorporated Santa Cruz County Projections

In order to ensure that the population shift resulting from annexation does not skew the shift-share results for Watsonville or unincorporated Santa Cruz County, population projections for Watsonville, unincorporated Santa Cruz County, and the annexation area were estimated separately.

To complete this adjustment, the estimated annexation area population was subtracted from the unincorporated Santa Cruz County population totals in 1990 and 2000. Similarly, the projected population from the annexation area population was added to Watsonville in 2010.

Independent shift-share projections were developed for each of the three sub-areas: Watsonville excluding the annexation area, unincorporated Santa Cruz County excluding the annexation area and the annexation area.

To complete the projections, the annexation area projected population growth was added to Watsonville. Unlike the special population projections described above, there are no further adjustments needed to translate the resulting population projections into housing projections.

Attachment 1: List of Meetings & Attendees

Agency	Meeting Date	Meeting Time	Location	AMBAG Attendees*	Other Attendees*
City of Gonzales	9/3/2019	1:30 PM	147 Fourth Street, Gonzales, CA	Maura Twomey, Heather Adamson and Paul Hierling	Matthew Sundt
City of Hollister	9/10/2019	1:30 PM	375 Fifth Street, Hollister, CA	Maura Twomey, Heather Adamson and Paul Hierling	Abraham Prado and Jamila Saqqa
City of Marina	8/21/2019	11:00 AM	209 Cypress Avenue, Marina, CA	Maura Twomey, Heather Adamson and Paul Hierling	Fred Aegerter, Christy Hopper and Matt Mogensen
City of Salinas	8/28/2019	1:30 PM	65 West Alisal Street, 2nd Floor, Salinas, CA	Maura Twomey, Heather Adamson and Paul Hierling	Megan Hunter and Adam Garrett
City of Santa Cruz	8/23/2019	1:00 PM	809 Center Street, Room 107, Santa Cruz, CA	Maura Twomey, Heather Adamson and Paul Hierling	Lee Butler
City of Seaside	9/10/2019	11:00 AM	656 Broadway Avenue, Seaside, CA 93955	Heather Adamson and Paul Hierling	Rick Medina
County of Monterey	8/7/2019	4:00 PM	1441 Schilling Pl, 2nd Floor, Salinas, CA	Maura Twomey, Heather Adamson and Paul Hierling	Brandon Swanson and John Dugan
County of Monterey	8/12/2019	3:15 PM	168 West Alisal, 3rd Floor, Salinas, CA	Paul Hierling	Darby Marshall and Anastacia Wyatt
County of San Benito	9/4/2019	1:00 PM	2301 Technology Parkway, Hollister, CA	Maura Twomey, Heather Adamson and Paul Hierling	Harry Mavrogenes, Taven Kinison Brown and Jamila Saqqa
County of Santa Cruz	8/23/2019	3:00 PM	701 Ocean Street, Room 400, Santa Cruz, CA	Maura Twomey, Heather Adamson and Paul Hierling	Kathy Molloy and Stephanie Hansen

*All attendees were at the meeting in person unless otherwise noted.

Agency	Meeting Date	Time	Location	AMBAG Attendees*	Jurisdiction Attendees*
City of Capitola	2/3/2020	9:30 AM	420 Capitola Ave., Capitola, CA	Heather Adamson	Katie Herlihy
City of Carmel-By-The-Sea	2/5/2020	9:30 AM	AMBAG Office	Maura Twomey, Gina Schmidt, Miranda Taylor	Marnie Waffle
City of Del Rey Oaks	2/13/2020	11:00 AM	650 Canyon Del Rey Blvd, Del Rey Oaks, CA	Heather Adamson and Miranda Taylor	Dino Pick and Denise Duffy
City of Gonzales	2/7/2020	2:00 PM	City of Gonzales, 147 Fourth Street, Gonzales, CA	Heather Adamson	Matthew Sundt
City of Greenfield	3/3/2020	9:00 AM	Greenfield City Hall, 599 El Camino Real, Greenfield, CA	Heather Adamson, Maura Twomey and Miranda Taylor	Paul Mugan
City of Hollister	3/10/2020	2:00 PM	City of Hollister, Development Services, 375 Fifth Street, Hollister, CA 95023	Heather Adamson	Abraham Prado, Jamila Saqqa, Eva Kelly and Ambur Cameron
City of King City	3/10/2020	11:00 AM	City of King City Hall, 212 South Vanderhurst Avenue, King City, CA 93930	Heather Adamson, Maura Twomey and Miranda Taylor	Doreen Liberto-Blanck and Maricruz Aguilar-Navarro
City of Marina	2/26/2020	2:30 PM	City of Marina, Community Depevelopment Dept, 209 Cypress Avenue, Marina, CA	Heather Adamson, Maura Twomey and Miranda Taylor	Christy Hopper and Lisa Berkley
City of Monterey	2/4/2020	1:00 PM	City of Monterey, 580 Pacific Street, Monterey, CA 93940	Heather Adamson, Maura Twomey, Miranda Taylor	Kim Cole
City of Pacific Grove	2/5/2020	11:30 AM	City of Pacific Grove, 300 Forest Avenue, 2nd Floor, Pacific Grove, CA 93950	Maura Twomey, Gina Schmidt, Miranda Taylor	Anastazia Aziz and Alyson Hunter
City of Salinas	3/2/2020	10:00 AM	City of Salinas, 65 West Alisal Street, 2nd Floor, Salinas, CA	Heather Adamson and Miranda Taylor	Megan Hunter and Tara Hullingers
City of San Juan Bautista	2/24/2020	9:00 AM	San Juan Bautista City Hall, 311 2nd Street, San Juan Bautista, CA	Heather Adamson	Don Reynolds and Mary Gilbert (SBtCOG)
City of Sand City	2/11/2020	3:00 PM	Sand City, City Hall, 1 Pendergrass Way, Sand City, CA	Heather Adamson, Maura Twomey, Miranda Taylor	Chuck Pooler and Aaron Blair
City of Santa Cruz	3/9/2020	11:00 AM	City of Santa Cruz, 809 Center Street, Room 107, Santa Cruz, CA	Heather Adamson	Lee Butler, Katherine Donovan and Eric Marlatt
City of Scotts Valley	2/3/2020	11:30 AM	1 Civic Center Drive, Scotts Valley, CA	Heather Adamson	Taylor Bateman
City of Seaside	3/3/2020	2:00 PM	656 Broadway Avenue, Seaside, CA 93955	Heather Adamson, Maura Twomey, Paul Hierling and Miranda Taylor	Kurt Overmeyer, Gloria Stearns and Sharon Mikesell
City of Soledad	2/24/2020	1:30 PM	City of Soledad, City Hall, 248 Main Street, Soledad, CA	Heather Adamson and Miranda Taylor	Brent Slama
City of Watsonville	2/21/2020	10:00 AM	Community Development Dept., 250 Main Street, Watsonville, CA 95076	Heather Adamson	Suzi Merriam and Justin Meek
	2/21/2020	10:00 AM	Community Development Dept., 250 Main Street, Watsonville, CA 95076	Heather Adamson	Suzi Merriam and Justin Meek
County of Monterey	3/17/2020	2:30 PM	GoTo Meeting	Heather Adamson and Paul Hierling	Brandon Swanson
County of San Benito	3/4/2020	3:00 PM	San Benito County - RMA, 2301 Technology Parkway, Hollister, CA	Heather Adamson and Maura Twomey	Harry Mavrogenes and Taven Kinison Brown
County of Santa Cruz	3/9/2020	3:00 PM	County of Santa Cruz, 701 Ocean Street, Room 400, Santa Cruz, CA	Heather Adamson	Kathy Molloy, Paia Levine, Barbara Mason, Stephanie Hansen and Anais Schenk
CSU Monterey Bay	2/5/2020	3:00 PM	2061 Intergarrison Road, Suite 84-A, Seaside, CA	Maura Twomey, Gina Schmidt, Miranda Taylor	Anya Spear and Matt McCluney
Monterey County LAFCO	2/11/2020	1:00 PM	LAFCO Monterey Co., 132 W. Gabilan Street, Suite 102, Salinas, CA 93901	Heather Adamson, Maura Twomey, Miranda Taylor	Kate McKenna
Santa Cruz County LAFCO	2/21/2020	1:00 PM	LAFCO, 701 Ocean Street, Room 318-D, Santa Cruz, CA 95060	Heather Adamson	Joe Serrano
UC Santa Cruz	2/25/2020	10:30 AM	UC Santa Cruz, 1156 High St, Barn G, Santa Cruz, CA 95064	Heather Adamson	Jolie Kerns and Oxo Slayer

*All attendees were at the meeting in person unless otherwise noted

Agency	Meeting Date	Meeting Time	Location	AMBAG Attendees	Jurisdiction Attendees
City of Capitola	5/19/2020	1:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Katie Herlihy
City of Carmel-By-The-Sea	5/26/2020	1:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Marnie Waffle
City of Del Rey Oaks	6/17/2020	4:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Dino Pick and Denise Duffy
City of Gonzales	5/26/2020	3:00 PM	GoTo Meeting	Heather Adamson, Paul Hierling, and Miranda Taylor	Matthew Sundt
City of Greenfield	6/11/2020	11:00 AM	GoTo Meeting	Maura Twomey, Heather Adamson, and Miranda Taylor	Paul Mugan
City of Hollister	5/29/2020	10:00 AM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Abraham Prado, Jamila Saqqa, Eva Kelly and Ambur Cameron from Hollister; Mary Gilbert from SBtCOG. Additionally, various consultants for the Hollister General Plan attended this meeting.
City of King City	6/2/2020	1:00 PM	GoTo Meeting	Heather Adamson and Miranda Taylor	Doreen Liberto-Blanck and Maricruz Aguilar-Navarro
City of Marina	5/28/2020	10:00 AM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Christy Hopper and Fred Aegerter
City of Monterey	5/29/2020	1:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Kimberly Cole
City of Pacific Grove	5/19/2020	3:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Anastazia Aziz, Alyson Hunter and Terri Schaeffer
City of Salinas	6/8/2020	2:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Megan Hunter, Tara Hullinger, and Jonathan Moore
City of San Juan Bautista	6/1/2020	1:30 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Don Reynolds and Mary Gilbert from SBtCOG
City of Sand City	6/17/2020	9:00 AM	GoTo Meeting	Heather Adamson, Paul Hierling, and Miranda Taylor	Chuck Pooler and Aaron Blair
City of Santa Cruz	5/18/2020	9:00 AM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Lee Butler, Katherine Donovan, Bonnie Lipscomb, Eric Marlatt and Matt Vanhua
City of Scotts Valley	6/3/2020	1:00 PM	GoTo Meeting	Maura Twomey, HPaul Hierling, and Miranda Taylor	Taylor Bateman
City of Seaside	6/11/2020	4:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Kurt Overmeyer and Gloria Stearns

Agency	Meeting Date	Meeting Time	Location	AMBAG Attendees	Jurisdiction Attendees
City of Soledad	6/16/2020	1:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Brent Slama
City of Watsonville	6/2/2020	3:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Suzi Merriam and Justin Meek
County of Monterey	6/3/2020	9:00 AM	GoTo Meeting	Maura Twomey, Paul Hierling, and Miranda Taylor	Brandon Swanson, John Dugan and Anastacia Wyatt
County of Monterey	6/29/2020	1:00 PM	GoTo Meeting	Maura Twomey, Paul Hierling, Miranda Taylor and Beth Jarosz (consultant)	Brandon Swanson, John Dugan, Craig Spencer and Anastacia Wyatt
County of San Benito	6/1/2020	9:00 AM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Harry Mavrogenes, Taven Kinison Brown and Mary Gilbert from SBtCOG
County of Santa Cruz	5/18/2020	3:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling, and Miranda Taylor	Paia Levine, Barbara Mason, Anais Schenk, Kathy Molloy, Stephanie Hansen
CSU Monterey Bay	6/16/2020	3:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling,	Anya Spear, Matt McCluney, and Kathleen Ventimiglia
CSU Monterey Bay	7/10/2020	1:00 PM	GoTo Meeting	Heather Adamson and Beth Jarosz (consultant)	Matt McCluney and Kathleen Ventimiglia
UC Santa Cruz	6/15/2020	3:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson, Paul Hierling,	Oxo Slayer

Agency	Meeting Date	Meeting Time	Location	AMBAG Attendees	Jurisdiction Attendees
City of Del Rey Oaks	8/25/2020	1:00 PM	GoTo Meeting	Heather Adamson	Dino Pick and Denise Duffy (consultant)
City of Greenfield	9/4/2020	2:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson and Beth Jarosz (consultant)	Rob Mullane (consultant) and Paul Mugan
City of Hollister	8/20/2020	11:00 AM	GoTo Meeting	Maura Twomey, Heather Adamson and Beth Jarosz (consultant)	Abraham Prado, Jamila Saqqa, Bryan Swanson, Eva Kelly, Ambur Cameron, Areli Perez and Marian Mendez from Hollister; Mary Gilbert from SBtCOG
City of Hollister	9/4/2020	3:30 PM	GoTo Meeting	Maura Twomey, Heather Adamson and Beth Jarosz (consultant)	Carol Lenoir
City of King City	8/24/2020	11:00 AM	GoTo Meeting	Maura Twomey and Heather Adamson	Doreen Liberto-Blanck and Maricruz Aguilar-Navarro
City of Marina	8/7/2020	3:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson and Beth Jarosz (consultant)	Christy Hopper, Fred Aegerter, Layne Long and Lisa Berkeley
City of Monterey			GoTo Meeting		
City of Pacific Grove	8/7/2020	1:30 PM	GoTo Meeting	Maura Twomey, Heather Adamson and Beth Jarosz (consultant)	Anastazia Aziz and Terri Schaeffer
City of Salinas	9/8/2020	2:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson and Beth Jarosz (consultant)	Megan Hunter and Jonathan Moore
County of Monterey	8/13/2020	3:30 PM	GoTo Meeting	Heather Adamson and Beth Jarosz (consultant)	Brandon Swanson and John Dugan
County of San Benito	8/10/2020	1:00 PM	GoTo Meeting	Maura Twomey, Heather Adamson and Beth Jarosz (consultant)	Harry Mavrogenes, Taven Kinison Brown, Jamila Saqqa, Gary Black (Hexagon), Ollie Zhou (Hexagon), Stan Ketchum (contract planner) and Mary Gilbert from SBtCOG

Agency	Meeting Date	Meeting Time	Location	AMBAG Attendees	Jurisdiction Attendees
City of San Juan Bautista	10/30/2020	9:00 AM	Go To Meeting	Maura Twomey, Heather Adamson and Beth Jarosz (consultant)	John Freeman, Don Reynolds, and Mary Gilbert from SBtCOG
County of San Benito	10/29/2020	3:00 PM	Go To Meeting	Maura Twomey, Heather Adamson and Beth Jarosz (consultant)	Anthony Botelho, Mark Medina, Taven Kinison Brown, Benny Young, Stan Stan Ketchums, and Mary Gilbert from SBtCOG
County of San Benito	11/2/2020	2:00 PM	Go To Meeting	Maura Twomey, Heather Adamson and Beth Jarosz (consultant)	Benny Young, Taven Kinison Brown, and Mary Gilbert from SBtCOG

Attachment 2: Employment Classification Explanations & Examples

AMBAG relies upon data from the California Employment Development Department and other statistical agencies (e.g. U.S. Bureau of Labor Statistics) for information about employment in the AMBAG region. Information is reported using the North American Industry Classification System (NAICS). NAICS is a production-orientated conceptual framework that groups establishments into industries based on their primary business activity. Establishments using similar material inputs, capital, and labor are classified in the same industry. In California, NAICS codes are assigned by the Labor Market Information Division (LMID) at the California Employment Development Department and can be changed at the request of the employer.²⁵

Companies within NAICS industrial categories may have similar material inputs and labor demands, but they may have very different trip generation rates—which are important for transportation modeling and planning. For some industries, AMBAG aggregates the NAICS sectors into larger categories with similar travel demand patterns, and in other industries, the data are disaggregated to better reflect job functions and trip generation patterns. Table 1 shows the cross-reference between NAICS industries and AMBAG sectors.

Table 12 Cross-reference Between AMBAG Forecast Sectors and NAICS Industries

Acronym	Description	NAICS ID*	NAICS Description
AGR	Agriculture (field work)	11*	Agriculture, Forestry, Fishing and Hunting
MFG	Manufacturing (incl. crop processing)	11*	Agriculture, Forestry, Fishing and Hunting
		21	Mining, Quarrying, and Oil and Gas Extraction
		31-33	Manufacturing
TR_CON	Site-based Skilled Trade	22	Utilities
		23	Construction
		48-49	Transportation and Warehousing
		56	Administrative & Support & Waste Mgmt. & Remediation

²⁵ California Employment Development Department, Labor Market Information Division website. Accessed on August 16, 2019 at <http://www.labormarketinfo.edd.ca.gov/LMID/NAICS.html>

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		92*	Public Administration
WHL	Wholesale (incl. agricultural wholesale)	11*	Agriculture, Forestry, Fishing and Hunting
		42	Wholesale Trade
RET	Retail (incl. farm stands)	11*	Agriculture, Forestry, Fishing and Hunting
		44-45	Retail Trade
FIRE	Financial and Professional Services	51	Information
		52	Finance and Insurance
		53	Real Estate and Rental and Leasing
		54	Professional, Scientific, and Technical Services
		55	Management of Companies and Enterprises
EDU	Education (incl. public schools)	61	Educational Services
		92*	Public Administration
HLT	Health Care and Social Assistance	62	Health Care and Social Assistance
SRV	Other Services	71	Arts, Entertainment, and Recreation
		72	Accommodation and Food Services
		81	Other Services (except Public Administration)
PUB	Public (excl. education and transport)	92*	Public Administration
SELF_EMPL	Self-employed		Self-Employed

*Note: Some NAICS industry sectors have been divided up, based on business operations and transportation demand, across AMBAG sectors.

Each category is described below.

Industry Sector Definitions

Agriculture (includes agriculture, forestry, fishing, and hunting)

- Establishments primarily engaged in **agriculture** that grow crops or raise animals; establishments that harvest timber; and establishments that harvest animals from a farm, ranch, or their natural habitats.

Examples: Farms; ranches; dairies; greenhouses; nurseries; orchards; grape vineyards; cattle feedlots; logging.

Important note: Within NAICS classifications, support activities for agricultural or animal production (e.g., harvesting contractors, farm labor contractors, crop packaging, warehousing) appear in

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manufacturing, transportation and warehousing, or wholesale. In addition, a comprehensive review of AMBAG region firms listed in the agriculture NAICS sector showed many support activities. AMBAG staff re-classified these to manufacturing, wholesale, or retail.

Site-based Skilled Trade (includes transportation and warehousing, utilities, construction, administrative and support and waste management and remediation services)

- Composed of a variety of sectors, this category includes:
 - establishments that are primarily engaged in the **construction** of buildings or engineering projects, preparation of sites for new construction, and/or subdividing land for sale as building sites.
 - establishments that provide **transportation** of passengers, cargo, **warehousing** and storage of goods, and support activities related to modes of transportation;
 - the **utility** sector which is comprised of establishments engaged in the provision of utility services: electric power, natural gas, steam supply, water supply, and sewage removal; and
 - establishments that perform routine support activities for the day-to-day operations of other organizations (**administrative and support and waste management services and remediation services**).

Examples: Air, rail, water, truck, transit and ground passenger, and pipeline transportation; postal service; couriers and messengers; electric power generation; water and sewage systems; construction of highways and dams, production of a specific component for a project, and construction of buildings (e.g., new work, additions, alterations, etc.); flooring, roofing, and siding contractors; office administrative services; temporary help services; collection agencies; hazardous waste collection.

Note: In NAICS classifications, public transportation services are often coded as “Public Administration.” In the AMBAG framework, public transportation is included here.

Manufacturing (includes mining, quarrying, and oil and gas extraction, manufacturing)

- Composed of two sectors, this category includes:
 - **manufacturing** establishments engaged in the mechanical, physical, or chemical transformation of materials into new products. Typically, these establishments use power-driven machines. However, this also includes establishments that transform materials by hand and are engaged in selling products to the general public made on the same premises from which they are sold; and
 - establishments engaged in **mining, quarrying, and oil and gas extraction** that extract naturally occurring mineral solids (e.g., coal or ores), liquid materials (e.g., crude petroleum), and gases (e.g., natural gas).

Examples: Iron ore mining; industrial sand mining; drilling oil and gas wells; and support activities for mining; fruit and vegetable preserving; animal slaughtering and processing; seafood product preparation and packaging; factories; mills; bakeries; candy stores (that make candy); custom tailors; breweries; wineries; bottled water manufacturing; book printing; iron foundries; paper manufacturing; chemical manufacturing; machine shops; and computer and electronic product manufacturing.

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Wholesale (includes wholesale)

- Includes establishments engaged in **wholesaling** merchandise, typically without transformation, and rendering services related to the sale of merchandise. Wholesalers sell merchandise to other businesses, normally operate from a warehouse or office, and do not advertise to the general public.

Examples: Establishments engaged in wholesaling products, such as motor vehicles, furniture, construction materials, sporting goods, toys, electronic goods, paper and paper products, drugs, textiles, apparel, groceries, newspapers, and tobacco products.

Retail (includes retail)

- Includes establishments engaged primarily in **retailing** merchandise, generally without transformation, and rendering services related to the sale of the merchandise.

Examples: Establishments engaged in retailing merchandise, such as motor vehicle and parts dealers, furniture and home furnishing stores, food and beverage stores, gasoline stations, clothing stores, sporting goods, hobby, book, florists and music stores.

Financial and Professional Services (includes information, finance and insurance, real estate and rental and leasing, professional, scientific, and technical services, management of companies and enterprises)

- Composed of a variety of service-providing sectors, this category includes:
 - establishments engaged in **information** processes (i.e., producing and distributing information and processing data);
 - establishments primarily engaged in **financial transactions** and/or facilitating financial transactions;
 - establishments primarily engaged in **renting, leasing**, and managing **real estate** for others;
 - establishments that specialize in performing **professional, scientific, and technical** activities for others; and
 - establishments that hold the securities of companies and enterprises for the purpose of owning a controlling interest or influencing **management** decisions.

Examples: Motion picture and sound recording industries; broadcasting; data processing and hosting; telecommunications; publishing industries; libraries and archives; commercial banking; credit card issuing; securities brokerage; portfolio management; direct life insurance carriers; passenger car rental; real estate agencies; commercial property managers; legal advice and representation; accounting, bookkeeping, and payroll services; architectural design services; computer services; research services; veterinary services; advertising; consulting; interior design services; public relations agencies.

Services (includes arts, entertainment, and recreation, accommodation and food services, other services)

- Composed of a variety of service-providing sectors, this category includes:
 - leisure and hospitality establishments that operate facilities or provide services to meet varied **arts**, cultural, entertainment, and **recreation** interests;

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- establishments that provide customers with lodging **accommodation** and/or preparing meals, snacks, and beverages for immediate consumption (**food services**); and
- establishments engaged in providing **services** not specifically provided for elsewhere in the classification system. This includes establishments primarily engaged in activities such as equipment and machinery repairing, promoting religious activities, pet care services, etc.
- *Examples:* Dance companies; museums; zoos; nature parks; hotels and motels; campgrounds; caterers; restaurants; general automotive repair; car washes; computer and office machine repair and maintenance; barber shops; nail salons; parking lots and garages; civic and social organizations; political organizations; and labor unions.

Education (includes education)

- Includes establishments that provide instruction, training, and **education** in a wide variety of subjects.

Examples: Elementary and secondary schools; colleges, universities, and professional schools; apprenticeship training; and exam preparation and tutoring.

Note: In NAICS classifications, public schools are often coded as “Public Administration.” In the AMBAG framework, public schools are included in education.

Health Care (includes health care and social assistance)

- Includes establishments that provide **health care** and **social assistance** for individuals.

Examples: Dentists; chiropractors; family planning centers; ambulance services; community food services; temporary shelters; adoption agencies; and child daycare services.

Public (includes government, excl. public schools)

- Includes **public administration** establishments active at the **federal, state, and local** levels that administer, oversee, and manage public programs, and have authority over other institutions within a given area.

Examples: Courts; police protection; executive offices; administrations of public health programs; and administration of economic programs.

Self-Employed

Self-employed workers are freelancers, consultants, business owners and others who do not work on payroll at a specific employer. Self-employed workers may work in any industry or occupation. What distinguishes them from the NAICS sectors listed above is that their work is not tracked in the unemployment insurance program—the primary source of data for employment by industry.

Base Year Data and Re-benchmarking

In 2015 AMBAG staff collected address-level employment data from the California Employment Development Department and InfoUSA. In many cases records matched in both databases, but in many cases there were differences between the two data sources—in industrial classification, number of

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jobs, address, or other characteristics. AMBAG staff conducted an extensive, record-by-record ground-truthing—determining which of the two records was accurate—to assemble a base-year employment database. Through this process, AMBAG also re-classified some records from one industry to another, to better match the trip generation rates. (This step is explained in more detail below.)

The resulting base-year employment database has somewhat different industrial classifications and total employment compared with trend data (1990-2019) from the California Employment Development Department used for the region-level forecast. To reconcile the two, we re-benchmarked the historical series (1990-2019) to reflect the validated base-year employment levels and industrial classifications.

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Attachment 3: Comparison of Population Forecast Methods

In working with AMBAG to produce the 2022 Regional Growth Forecast, PRB conducted an evaluation of several population forecasting methods to ensure that the employment-driven population forecast technique was reasonable and reliable. While any forecast is a best guess given the most current information at the time it is produced, consistent results across several models lend credibility to the forecast results.

PRB compared population forecast results of the 2022 RGF (employment-driven method) with three other population forecasts: a cohort-change ratio (to 2025), a cohort-component forecast (to 2045), and the official, vintage 2019 forecast from the California Department of Finance. Results are presented in the table below.

The cohort-change ratio relied upon estimates of the population by age, race/ethnicity, and sex for the years 2000, 2005, 2010, and 2015. The method applied change ratios from 2005 to 2015 to predict the 2025 population and from 2010 to 2020 to predict the 2030 population.

The cohort-component forecast relied upon 2010 population by age, race/ethnicity, and sex, as well as data from the California Department of Public Health on mortality rates by age and sex, infant mortality rates by race/ethnicity and sex, and fertility rates by age and race/ethnicity. Modest adjustments were made to forecast fertility and mortality rates to reflect modest declines in teen birth rate and stalled improvements in life expectancy. PRB also produced projections under three different migration scenarios—a return to historic migration levels (High), low international migration (Mid), and net out-migration (Low).

The California Department of Finance vintage 2019 figures are presented without adjustment.

Table 13 Comparison of Forecast Methods

	2022 RGF	Cohort Change Ratio	Cohort Component High	Cohort Component Mid	Cohort Component Low	California Dept of Finance
2010	732,708	732,708	732,708	732,708	732,708	732,708
2015	762,241	762,676	762,676	762,676	762,676	762,318
2020	774,729	790,682	786,757	786,757	786,757	786,753
2025	800,726	814,533	818,468	808,103	801,506	804,777
2030	824,992	826,866	847,469	829,061	814,722	823,570
2035	842,189	n.a.	873,209	847,730	825,168	839,044
2040	857,828	n.a.	892,057	858,677	827,536	850,477
2045	869,776	n.a.	901,742	859,912	819,970	858,292

Sources: PRB; California Department of Finance

Attachment 4: Group Quarters and Housing

Residents of the region may live in housing or group quarters. In some cases—such as farmworker housing, senior living facilities, and apartment-style college dorms—it may be less clear whether the living arrangement is housing or group quarters. In addition, some structures—such as vacation rentals or accessory units—may be considered housing for the purposes of the housing inventory, but may not be considered available as part of the residential real estate market. This section provides some clarity on how living arrangements are classified.

Housing

A housing unit is any single-family residential structure (like a house or a manufactured home) or any distinct unit in a multi-unit building where the unit provides privacy for the occupants, and the unit has access to the outside, and occupants can come-and-go as they wish (not a custodial facility), and occupancy is independent of any institutional affiliation.²⁶ Common examples include single family detached units, condominiums, rowhomes, townhomes, apartments, and manufactured housing. The U.S. Census Bureau defines Housing Units as follows:

A housing unit may be a house, an apartment, a mobile home, a group of rooms or a single room that is occupied (or, if vacant, intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live separately from any other individuals in the building and which have direct access from outside the building or through a common hall. For vacant units, the criteria of separateness and direct access are applied to the intended occupants whenever possible. If that information cannot be obtained, the criteria are applied to the previous occupants.

Both occupied and vacant housing units are included in the housing unit inventory. Boats, recreational vehicles (RVs), vans, tents, railroad cars, and the like are included only if they are occupied as someone's current place of residence. Vacant mobile homes are included provided they are intended for occupancy on the site where they stand. Vacant mobile homes on dealers' sales lots, at the factory, or in storage yards are excluded from the housing inventory. Also excluded from the housing inventory are quarters being used entirely for nonresidential

²⁶ Todd Graham. 2020. "Local Planning Handbook: Housing Unit vs. Group Quarters," accessed at <https://metro council.org/Handbook/Files/Resources/Fact-Sheet/LAND-USE/Housing-Unit-vs-Group-Quarter.aspx> on January 16, 2021.

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purposes, such as a store or an office, or quarters used for the storage of business supplies or inventory, machinery, or agricultural products.²⁷

It is important to note that the housing definition does not change based on a unit's occupancy status, nor its availability for rent or sale. For practical purposes, in the regional growth forecast units are counted as part of the housing inventory regardless of occupancy or availability in the real estate market. Second homes, vacation rentals, and accessory dwelling units are all counted as housing.

Group Quarters

A group quarters facility is one that houses multiple, unrelated people, where occupants do not have privacy, or there is controlled access to entering/leaving, or it's a facility that houses only an institutional or service-receiving population.²⁸ Common examples include college dormitories, military barracks, assisted living facilities, jails/prisons, and emergency/crisis shelters. In the decennial census, group quarters counts also include the unsheltered population.

The U.S. Census Bureau defines group quarters as follows:

A Group Quarters (GQs) is a place where people live or stay in a group living arrangement that is owned or managed by an entity or organization providing housing and/or services for the residents. These services may include custodial or medical care, as well as other types of assistance, and residency is commonly restricted to those receiving these services. This is not a typical household-type living arrangement. People living in GQs usually are not related to each other. GQs include such places as college residence halls, residential treatment centers, skilled nursing facilities, group homes, military barracks, correctional facilities, workers' dormitories, and facilities for people experiencing homelessness. GQs are defined according to the housing and/or services provided to residents and are identified by Census GQ type codes.²⁹

²⁷ U.S. Census Bureau. "American Community Survey and Puerto Rico Community Survey 2019 Subject Definitions," (December 2020) accessed at https://www2.census.gov/programs-surveys/acs/tech_docs/subject_definitions/2019_ACSSubjectDefinitions.pdf on January 16, 2021.

²⁸ Todd Graham. 2020. "Local Planning Handbook: Housing Unit vs. Group Quarters," accessed at <https://metro council.org/Handbook/Files/Resources/Fact-Sheet/LAND-USE/Housing-Unit-vs-Group-Quarter.aspx> on January 16, 2021.

²⁹ U.S. Census Bureau. "American Community Survey and Puerto Rico Community Survey 2019 Subject Definitions," (December 2020) accessed at https://www2.census.gov/programs-surveys/acs/tech_docs/subject_definitions/2019_ACSSubjectDefinitions.pdf on January 16, 2021.

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Group quarters facilities may house many residents, such as a single dormitory building with dozens of students or a single prison building with thousands of inmates. For this reason, group quarters are counted as population, not as units.

University Housing

University-affiliated housing may be counted as housing or group quarters. In general, part-year student housing is considered group quarters and year-round faculty / student family housing is counted as housing. These distinctions tend to hold even if the university housing structures appear similar to a traditional apartment.

If a university builds a new dormitory building, the number of students housed within that building will be counted as group quarters residents and removed from the calculation for household demand—rather than adding the dormitory as one housing unit (with dozens, or even hundreds, of household occupants) to the forecast.

Universities may also provide faculty and family housing units that may be leased to university-affiliated staff or students and their families. In these cases, because families live together, rentals are year-round, and the living arrangement is not limited to institutional affiliation (i.e. unaffiliated family members or roommates may share the housing), we count those residents as belonging to households and we count the units as part of the housing stock.

Farmworker Housing

Farmworker housing may be counted in the housing inventory or as group quarters. Distinctions follow the rules outlined above. For example, if farmworker housing is restricted to employees of a particular company or the housing is dormitory-style, it would be counted as group quarters. If farmworker housing is not restricted to a particular company (e.g. non-worker family members can share the residence) and is arranged as separate living quarters, it would be counted in the housing unit inventory.

Attachment 5: Jurisdiction Growth Projections

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Capitola

POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776	107,535	14%
% change		4.0%	1.6%	3.4%	3.0%	2.1%	1.9%	1.4%		
Capitola	9,918	10,224	10,108	10,485	10,794	10,957	11,049	11,126	902	9%
% change		3.1%	-1.1%	3.7%	2.9%	1.5%	0.8%	0.7%		

HOUSEHOLD POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	700,207	728,352	740,321	763,380	784,511	799,310	811,954	822,824	94,472	13%
% change		4.0%	1.6%	3.1%	2.8%	1.9%	1.6%	1.3%		
Capitola	9,770	10,076	9,960	10,333	10,637	10,799	10,888	10,964	888	9%
% change		3.1%	-1.2%	3.7%	2.9%	1.5%	0.8%	0.7%		

GROUP QUARTERS POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	32,501	33,889	34,408	37,346	40,481	42,879	45,874	46,952	13,063	39%
% change		4.3%	1.5%	8.5%	8.4%	5.9%	7.0%	2.3%		
Capitola	148	148	148	152	157	158	161	162	14	9%
% change		0.0%	0.0%	2.7%	3.3%	0.6%	1.9%	0.6%		

HOUSING									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900	42,240	16%
% change		0.9%	2.0%	3.7%	3.9%	2.8%	1.7%	1.2%		
Capitola	5,534	5,537	5,554	5,786	5,970	6,009	6,017	6,017	480	9%
% change		0.1%	0.3%	4.2%	3.2%	0.7%	0.1%	0.0%		

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Capitola

HOUSEHOLDS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	236,059	238,862	243,863	253,106	262,493	269,175	273,462	276,730	37,868	16%
% change		1.2%	2.1%	3.8%	3.7%	2.5%	1.6%	1.2%		
Capitola	4,626	4,694	4,773	4,952	5,087	5,134	5,151	5,152	458	10%
% change		1.5%	1.7%	3.8%	2.7%	0.9%	0.3%	0.0%		

VACANCY RATE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	9.3%	9.1%	8.9%	8.8%	9.0%	9.2%	9.2%	9.2%	0.2	2%
Capitola	16.4%	15.2%	14.1%	14.4%	14.8%	14.6%	14.4%	14.4%	-0.8	-6%

AVERAGE HOUSEHOLD SIZE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	2.97	3.05	3.04	3.02	2.99	2.97	2.97	2.97	-0.08	0%
Capitola	2.11	2.15	2.09	2.09	2.09	2.10	2.11	2.13	-0.02	0%

JOBS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	351,735	377,335	406,280	410,017	418,132	425,845	434,147	442,824	65,489	17%
% change		7.3%	7.7%	0.9%	2.0%	1.8%	1.9%	2.0%		
Capitola										
Agriculture (field work)	n/a	7	8	8	8	8	8	8	1	14%
Manufacturing	n/a	469	524	526	529	534	539	544	75	16%
Site-based Skilled Trade	n/a	770	867	884	906	922	942	962	192	25%
Wholesale	n/a	98	107	107	107	107	107	107	9	9%
Retail	n/a	3,410	3,317	3,327	3,354	3,394	3,434	3,469	59	2%
Financial & Prof. Serv.	n/a	1,841	1,899	1,913	1,967	2,023	2,083	2,142	301	16%
Education	n/a	334	368	370	379	389	399	409	75	22%
Health Care & Social Assist	n/a	1,571	1,693	1,738	1,777	1,826	1,876	1,926	355	23%
Other Services	n/a	2,493	2,761	2,784	2,872	2,952	3,032	3,112	619	25%
Public	n/a	298	328	330	335	340	345	350	52	17%
Self-employed	n/a	375	378	389	399	407	416	425	50	13%
Capitola	n/a	11,666	12,250	12,376	12,633	12,902	13,181	13,454	1,788	15%
% change			5.0%	1.0%	2.1%	2.1%	2.2%	2.1%		

Important Note: Independent rounding results in some cases in which parts do not sum to the total.

Data Sources:

Population and Housing 2010-2019 from California Department of Finance.

Employment 2010 and 2015 from AMBAG based on California Employment Development Dept. and InfoUSA.

All projections from 2022 Regional Growth Forecast, produced by AMBAG and PRB.

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Carmel-By-The-Sea

POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776	107,535	14%
% change		4.0%	1.6%	3.4%	3.0%	2.1%	1.9%	1.4%		
Carmel-By-The-Sea	3,722	3,854	3,949	3,946	3,954	3,964	3,974	3,984	130	3%
% change		3.5%	2.5%	-0.1%	0.2%	0.3%	0.3%	0.3%		

HOUSEHOLD POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	700,207	728,352	740,321	763,380	784,511	799,310	811,954	822,824	94,472	13%
% change		4.0%	1.6%	3.1%	2.8%	1.9%	1.6%	1.3%		
Carmel-By-The-Sea	3,722	3,854	3,949	3,946	3,954	3,964	3,974	3,984	130	3%
% change		3.5%	2.5%	-0.1%	0.2%	0.3%	0.3%	0.3%		

GROUP QUARTERS POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	32,501	33,889	34,408	37,346	40,481	42,879	45,874	46,952	13,063	39%
% change		4.3%	1.5%	8.5%	8.4%	5.9%	7.0%	2.3%		
Carmel-By-The-Sea	0	0	0	0	0	0	0	0	0	--
% change		--	--	--	--	--	--	--		

HOUSING									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900	42,240	16%
% change		0.9%	2.0%	3.7%	3.9%	2.8%	1.7%	1.2%		
Carmel-By-The-Sea	3,417	3,417	3,437	3,437	3,442	3,450	3,453	3,459	42	1%
% change		0.0%	0.6%	0.0%	0.1%	0.2%	0.1%	0.2%		

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Carmel-By-The-Sea

HOUSEHOLDS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	236,059	238,862	243,863	253,106	262,493	269,175	273,462	276,730	37,868	16%
% change		1.2%	2.1%	3.8%	3.7%	2.5%	1.6%	1.2%		
Carmel-By-The-Sea	2,095	2,106	2,129	2,129	2,132	2,137	2,142	2,148	42	2%
% change		0.5%	1.1%	0.0%	0.1%	0.2%	0.2%	0.3%		

VACANCY RATE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	9.3%	9.1%	8.9%	8.8%	9.0%	9.2%	9.2%	9.2%	0.2	2%
Carmel-By-The-Sea	38.7%	38.4%	38.1%	38.1%	38.1%	38.1%	38.0%	37.9%	-0.5	-1%

AVERAGE HOUSEHOLD SIZE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	2.97	3.05	3.04	3.02	2.99	2.97	2.97	2.97	-0.08	0%
Carmel-By-The-Sea	1.78	1.83	1.85	1.85	1.85	1.85	1.86	1.85	0.02	0%

JOBS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	351,735	377,335	406,280	410,017	418,132	425,845	434,147	442,824	65,489	17%
% change		7.3%	7.7%	0.9%	2.0%	1.8%	1.9%	2.0%		
Carmel-By-The-Sea										
Agriculture (field work)	n/a	15	16	16	16	16	16	16	1	7%
Manufacturing	n/a	106	118	118	118	118	118	118	12	11%
Site-based Skilled Trade	n/a	86	97	98	100	100	100	100	14	16%
Wholesale	n/a	17	19	19	19	20	21	21	4	24%
Retail	n/a	645	627	629	633	638	643	649	4	1%
Financial & Prof. Serv.	n/a	715	738	745	765	785	808	832	117	16%
Education	n/a	63	69	70	70	71	71	71	8	13%
Health Care & Social Assist	n/a	61	67	67	67	67	67	67	6	10%
Other Services	n/a	1,524	1,688	1,702	1,755	1,805	1,855	1,905	381	25%
Public	n/a	47	52	52	52	52	52	52	5	11%
Self-employed	n/a	74	75	77	79	80	82	84	10	14%
Carmel-By-The-Sea	n/a	3,353	3,566	3,593	3,674	3,752	3,833	3,915	562	17%
% change			6.4%	0.8%	2.3%	2.1%	2.2%	2.1%		

Important Note: Independent rounding results in some cases in which parts do not sum to the total.

Data Sources:

Population and Housing 2010-2019 from California Department of Finance.

Employment 2010 and 2015 from AMBAG based on California Employment Development Dept. and InfoUSA.

All projections from 2022 Regional Growth Forecast, produced by AMBAG and PRB.

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Del Rey Oaks

POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776	107,535	14%
% change		4.0%	1.6%	3.4%	3.0%	2.1%	1.9%	1.4%		
Del Rey Oaks	1,624	1,663	1,662	1,693	1,734	1,859	2,330	2,650	987	59%
% change		2.4%	-0.1%	1.9%	2.4%	7.2%	25.3%	13.7%		

HOUSEHOLD POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	700,207	728,352	740,321	763,380	784,511	799,310	811,954	822,824	94,472	13%
% change		4.0%	1.6%	3.1%	2.8%	1.9%	1.6%	1.3%		
Del Rey Oaks	1,624	1,663	1,662	1,693	1,734	1,859	2,330	2,650	987	59%
% change		2.4%	-0.1%	1.9%	2.4%	7.2%	25.3%	13.7%		

GROUP QUARTERS POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	32,501	33,889	34,408	37,346	40,481	42,879	45,874	46,952	13,063	39%
% change		4.3%	1.5%	8.5%	8.4%	5.9%	7.0%	2.3%		
Del Rey Oaks	0	0	0	0	0	0	0	0	0	--
% change		--	--	--	--	--	--	--		

HOUSING									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900	42,240	16%
% change		0.9%	2.0%	3.7%	3.9%	2.8%	1.7%	1.2%		
Del Rey Oaks	741	741	741	762	809	848	1,052	1,195	454	61%
% change		0.0%	0.0%	2.8%	6.2%	4.8%	24.1%	13.6%		

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Del Rey Oaks

HOUSEHOLDS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	236,059	238,862	243,863	253,106	262,493	269,175	273,462	276,730	37,868	16%
% change		1.2%	2.1%	3.8%	3.7%	2.5%	1.6%	1.2%		
Del Rey Oaks	701	693	683	696	713	764	958	1,088	395	57%
% change		-1.1%	-1.4%	1.9%	2.4%	7.2%	25.4%	13.6%		

VACANCY RATE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	9.3%	9.1%	8.9%	8.8%	9.0%	9.2%	9.2%	9.2%	0.2	2%
Del Rey Oaks	5.4%	6.5%	7.8%	8.7%	11.9%	9.9%	8.9%	9.0%	2.5	38%

AVERAGE HOUSEHOLD SIZE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	2.97	3.05	3.04	3.02	2.99	2.97	2.97	2.97	-0.08	0%
Del Rey Oaks	2.32	2.40	2.43	2.43	2.43	2.43	2.43	2.44	0.04	0%

JOBS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	351,735	377,335	406,280	410,017	418,132	425,845	434,147	442,824	65,489	17%
% change		7.3%	7.7%	0.9%	2.0%	1.8%	1.9%	2.0%		
Del Rey Oaks										
Agriculture (field work)	n/a	7	8	8	8	8	8	8	1	14%
Manufacturing	n/a	13	15	15	15	15	15	15	2	15%
Site-based Skilled Trade	n/a	40	45	45	45	45	45	45	5	13%
Wholesale	n/a	13	14	14	14	15	16	16	3	23%
Retail	n/a	126	123	123	125	128	131	135	9	7%
Financial & Prof. Serv.	n/a	150	155	156	161	166	171	176	26	17%
Education	n/a	21	23	23	26	27	28	28	7	33%
Health Care & Social Assist	n/a	17	18	18	18	18	18	18	1	6%
Other Services	n/a	264	292	294	304	313	323	332	68	26%
Public	n/a	9	10	10	10	10	10	10	1	11%
Self-employed	n/a	45	45	47	48	49	50	51	6	13%
Del Rey Oaks	n/a	705	748	753	774	794	815	834	129	18%
% change			6.1%	0.7%	2.8%	2.6%	2.6%	2.3%		

Important Note: Independent rounding results in some cases in which parts do not sum to the total.

Data Sources:

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Final 2022 Regional Growth Forecast

Gonzales

POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776	107,535	14%
% change		4.0%	1.6%	3.4%	3.0%	2.1%	1.9%	1.4%		
Gonzales	8,187	8,441	8,506	9,650	13,492	14,630	15,398	15,711	7,270	86%
% change		3.1%	0.8%	13.4%	39.8%	8.4%	5.2%	2.0%		

HOUSEHOLD POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	700,207	728,352	740,321	763,380	784,511	799,310	811,954	822,824	94,472	13%
% change		4.0%	1.6%	3.1%	2.8%	1.9%	1.6%	1.3%		
Gonzales	8,181	8,435	8,500	9,643	13,483	14,620	15,387	15,700	7,265	86%
% change		3.1%	0.8%	13.4%	39.8%	8.4%	5.2%	2.0%		

GROUP QUARTERS POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	32,501	33,889	34,408	37,346	40,481	42,879	45,874	46,952	13,063	39%
% change		4.3%	1.5%	8.5%	8.4%	5.9%	7.0%	2.3%		
Gonzales	6	6	6	7	9	10	11	11	5	83%
% change		0.0%	0.0%	16.7%	28.6%	11.1%	10.0%	0.0%		

HOUSING									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900	42,240	16%
% change		0.9%	2.0%	3.7%	3.9%	2.8%	1.7%	1.2%		
Gonzales	1,989	1,987	1,987	2,399	3,630	4,182	4,474	4,626	2,639	133%
% change		-0.1%	0.0%	20.7%	51.3%	15.2%	7.0%	3.4%		

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Final 2022 Regional Growth Forecast

Gonzales

HOUSEHOLDS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	236,059	238,862	243,863	253,106	262,493	269,175	273,462	276,730	37,868	16%
% change		1.2%	2.1%	3.8%	3.7%	2.5%	1.6%	1.2%		
Gonzales	1,906	1,895	1,885	2,263	3,388	3,861	4,111	4,251	2,356	124%
% change		-0.6%	-0.5%	20.1%	49.7%	14.0%	6.5%	3.4%		

VACANCY RATE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	9.3%	9.1%	8.9%	8.8%	9.0%	9.2%	9.2%	9.2%	0.2	2%
Gonzales	4.2%	4.6%	5.1%	5.7%	6.7%	7.7%	8.1%	8.1%	3.5	75%

AVERAGE HOUSEHOLD SIZE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	2.97	3.05	3.04	3.02	2.99	2.97	2.97	2.97	-0.08	0%
Gonzales	4.29	4.45	4.51	4.26	3.98	3.79	3.74	3.69	-0.76	0%

JOBS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	351,735	377,335	406,280	410,017	418,132	425,845	434,147	442,824	65,489	17%
% change		7.3%	7.7%	0.9%	2.0%	1.8%	1.9%	2.0%		
Gonzales										
Agriculture (field work)	n/a	1,874	2,052	2,053	2,058	2,063	2,068	2,073	199	11%
Manufacturing	n/a	267	298	301	306	306	306	306	39	15%
Site-based Skilled Trade	n/a	1,434	1,614	1,657	1,725	1,781	1,844	1,910	476	33%
Wholesale	n/a	1,240	1,351	1,345	1,388	1,428	1,468	1,508	268	22%
Retail	n/a	186	181	186	196	206	206	206	20	11%
Financial & Prof. Serv.	n/a	34	35	35	36	36	37	37	3	9%
Education	n/a	208	229	230	235	240	245	250	42	20%
Health Care & Social Assist	n/a	141	153	158	163	168	173	178	37	26%
Other Services	n/a	210	232	233	240	245	250	255	45	21%
Public	n/a	114	125	126	126	126	129	134	20	18%
Self-employed	n/a	56	56	58	60	61	62	63	7	13%
Gonzales	n/a	5,764	6,326	6,382	6,533	6,660	6,788	6,920	1,156	20%
% change			9.8%	0.9%	2.4%	1.9%	1.9%	1.9%		

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Final 2022 Regional Growth Forecast

Greenfield

POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776	107,535	14%
% change		4.0%	1.6%	3.4%	3.0%	2.1%	1.9%	1.4%		
Greenfield	16,330	17,172	18,284	19,342	19,734	19,961	20,202	20,433	3,261	19%
% change		5.2%	6.5%	5.8%	2.0%	1.2%	1.2%	1.1%		

HOUSEHOLD POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	700,207	728,352	740,321	763,380	784,511	799,310	811,954	822,824	94,472	13%
% change		4.0%	1.6%	3.1%	2.8%	1.9%	1.6%	1.3%		
Greenfield	16,301	17,143	18,255	19,311	19,703	19,929	20,170	20,400	3,257	19%
% change		5.2%	6.5%	5.8%	2.0%	1.1%	1.2%	1.1%		

GROUP QUARTERS POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	32,501	33,889	34,408	37,346	40,481	42,879	45,874	46,952	13,063	39%
% change		4.3%	1.5%	8.5%	8.4%	5.9%	7.0%	2.3%		
Greenfield	29	29	29	31	31	32	32	33	4	14%
% change		0.0%	0.0%	6.9%	0.0%	3.2%	0.0%	3.1%		

HOUSING									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900	42,240	16%
% change		0.9%	2.0%	3.7%	3.9%	2.8%	1.7%	1.2%		
Greenfield	3,752	3,794	3,981	4,359	4,766	5,047	5,164	5,238	1,444	38%
% change		1.1%	4.9%	9.5%	9.3%	5.9%	2.3%	1.4%		

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Greenfield

HOUSEHOLDS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	236,059	238,862	243,863	253,106	262,493	269,175	273,462	276,730	37,868	16%
% change		1.2%	2.1%	3.8%	3.7%	2.5%	1.6%	1.2%		
Greenfield	3,460	3,506	3,686	4,033	4,358	4,588	4,693	4,744	1,238	35%
% change		1.3%	5.1%	9.4%	8.1%	5.3%	2.3%	1.1%		

VACANCY RATE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	9.3%	9.1%	8.9%	8.8%	9.0%	9.2%	9.2%	9.2%	0.2	2%
Greenfield	7.8%	7.6%	7.4%	7.5%	8.6%	9.1%	9.1%	9.4%	1.8	24%

AVERAGE HOUSEHOLD SIZE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	2.97	3.05	3.04	3.02	2.99	2.97	2.97	2.97	-0.08	0%
Greenfield	4.71	4.89	4.95	4.79	4.52	4.34	4.30	4.30	-0.59	0%

JOBS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	351,735	377,335	406,280	410,017	418,132	425,845	434,147	442,824	65,489	17%
% change		7.3%	7.7%	0.9%	2.0%	1.8%	1.9%	2.0%		
Greenfield										
Agriculture (field work)	n/a	5,419	5,934	5,938	5,956	5,976	5,996	6,016	597	11%
Manufacturing	n/a	34	38	38	38	38	38	38	4	12%
Site-based Skilled Trade	n/a	199	224	254	285	315	347	382	183	92%
Wholesale	n/a	85	93	105	130	155	180	205	120	141%
Retail	n/a	227	221	222	224	229	234	238	11	5%
Financial & Prof. Serv.	n/a	141	146	147	152	157	162	167	26	18%
Education	n/a	374	412	415	425	435	445	455	81	22%
Health Care & Social Assist	n/a	285	309	319	328	338	348	358	73	26%
Other Services	n/a	257	284	286	296	306	316	326	69	27%
Public	n/a	150	165	166	167	167	170	175	25	17%
Self-employed	n/a	56	56	58	60	61	62	63	7	13%
Greenfield	n/a	7,227	7,882	7,948	8,061	8,177	8,298	8,423	1,196	17%
% change			9.1%	0.8%	1.4%	1.4%	1.5%	1.5%		

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Final 2022 Regional Growth Forecast

Hollister

POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776	107,535	14%
% change		4.0%	1.6%	3.4%	3.0%	2.1%	1.9%	1.4%		
Hollister	34,928	37,314	40,646	42,604	43,327	44,421	45,345	45,599	8,285	22%
% change		6.8%	8.9%	4.8%	1.7%	2.5%	2.1%	0.6%		

HOUSEHOLD POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	700,207	728,352	740,321	763,380	784,511	799,310	811,954	822,824	94,472	13%
% change		4.0%	1.6%	3.1%	2.8%	1.9%	1.6%	1.3%		
Hollister	34,813	37,077	40,412	42,361	43,078	44,171	45,090	45,343	8,266	22%
% change		6.5%	9.0%	4.8%	1.7%	2.5%	2.1%	0.6%		

GROUP QUARTERS POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	32,501	33,889	34,408	37,346	40,481	42,879	45,874	46,952	13,063	39%
% change		4.3%	1.5%	8.5%	8.4%	5.9%	7.0%	2.3%		
Hollister	115	237	234	243	249	250	255	256	19	8%
% change		106.1%	-1.3%	3.8%	2.5%	0.4%	2.0%	0.4%		

HOUSING									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900	42,240	16%
% change		0.9%	2.0%	3.7%	3.9%	2.8%	1.7%	1.2%		
Hollister	10,401	10,757	11,917	12,501	13,177	13,701	14,054	14,122	3,365	31%
% change		3.4%	10.8%	4.9%	5.4%	4.0%	2.6%	0.5%		

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Final 2022 Regional Growth Forecast

Hollister

HOUSEHOLDS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	236,059	238,862	243,863	253,106	262,493	269,175	273,462	276,730	37,868	16%
% change		1.2%	2.1%	3.8%	3.7%	2.5%	1.6%	1.2%		
Hollister	9,860	10,334	11,548	12,103	12,724	13,203	13,526	13,582	3,248	31%
% change		4.8%	11.7%	4.8%	5.1%	3.8%	2.4%	0.4%		

VACANCY RATE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	9.3%	9.1%	8.9%	8.8%	9.0%	9.2%	9.2%	9.2%	0.2	2%
Hollister	5.2%	3.9%	3.1%	3.2%	3.4%	3.6%	3.8%	3.8%	-0.1	-3%

AVERAGE HOUSEHOLD SIZE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	2.97	3.05	3.04	3.02	2.99	2.97	2.97	2.97	-0.08	0%
Hollister	3.53	3.59	3.50	3.50	3.39	3.35	3.33	3.34	-0.25	0%

JOBS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	351,735	377,335	406,280	410,017	418,132	425,845	434,147	442,824	65,489	17%
% change		7.3%	7.7%	0.9%	2.0%	1.8%	1.9%	2.0%		
Hollister										
Agriculture (field work)	n/a	209	229	229	229	229	229	229	20	10%
Manufacturing	n/a	1,511	1,688	1,697	1,714	1,724	1,734	1,744	233	15%
Site-based Skilled Trade	n/a	2,178	2,451	2,505	2,599	2,673	2,749	2,837	659	30%
Wholesale	n/a	426	464	457	462	467	472	477	51	12%
Retail	n/a	1,910	1,858	1,863	1,877	1,897	1,917	1,937	27	1%
Financial & Prof. Serv.	n/a	1,107	1,142	1,156	1,239	1,327	1,417	1,509	402	36%
Education	n/a	847	933	939	962	983	1,006	1,036	189	22%
Health Care & Social Assist	n/a	2,162	2,347	2,423	2,487	2,553	2,622	2,693	531	25%
Other Services	n/a	1,955	2,165	2,200	2,330	2,450	2,574	2,699	744	38%
Public	n/a	829	911	916	931	946	965	985	156	19%
Self-employed	n/a	1,294	1,304	1,343	1,377	1,406	1,436	1,467	173	13%
Hollister	n/a	14,428	15,492	15,728	16,207	16,655	17,121	17,613	3,185	22%
% change			7.4%	1.5%	3.0%	2.8%	2.8%	2.9%		

Important Note: Independent rounding results in some cases in which parts do not sum to the total.

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Final 2022 Regional Growth Forecast

King City

POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776	107,535	14%
% change		4.0%	1.6%	3.4%	3.0%	2.1%	1.9%	1.4%		
King City	12,874	13,736	14,797	15,376	16,101	16,689	16,881	17,064	3,328	24%
% change		6.7%	7.7%	3.9%	4.7%	3.7%	1.2%	1.1%		

HOUSEHOLD POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	700,207	728,352	740,321	763,380	784,511	799,310	811,954	822,824	94,472	13%
% change		4.0%	1.6%	3.1%	2.8%	1.9%	1.6%	1.3%		
King City	12,815	13,677	14,588	15,167	15,892	16,480	16,672	16,855	3,178	23%
% change		6.7%	6.7%	4.0%	4.8%	3.7%	1.2%	1.1%		

GROUP QUARTERS POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	32,501	33,889	34,408	37,346	40,481	42,879	45,874	46,952	13,063	39%
% change		4.3%	1.5%	8.5%	8.4%	5.9%	7.0%	2.3%		
King City	59	59	209	209	209	209	209	209	150	254%
% change		0.0%	254.2%	0.0%	0.0%	0.0%	0.0%	0.0%		

HOUSING									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900	42,240	16%
% change		0.9%	2.0%	3.7%	3.9%	2.8%	1.7%	1.2%		
King City	3,218	3,283	3,432	3,672	4,002	4,282	4,356	4,403	1,120	34%
% change		2.0%	4.5%	7.0%	9.0%	7.0%	1.7%	1.1%		

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Final 2022 Regional Growth Forecast

King City

HOUSEHOLDS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	236,059	238,862	243,863	253,106	262,493	269,175	273,462	276,730	37,868	16%
% change		1.2%	2.1%	3.8%	3.7%	2.5%	1.6%	1.2%		
King City	3,008	3,094	3,258	3,476	3,759	3,992	4,049	4,091	997	32%
% change		2.9%	5.3%	6.7%	8.1%	6.2%	1.4%	1.0%		

VACANCY RATE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	9.3%	9.1%	8.9%	8.8%	9.0%	9.2%	9.2%	9.2%	0.2	2%
King City	6.5%	5.8%	5.1%	5.3%	6.1%	6.8%	7.0%	7.1%	1.3	23%

AVERAGE HOUSEHOLD SIZE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	2.97	3.05	3.04	3.02	2.99	2.97	2.97	2.97	-0.08	0%
King City	4.26	4.42	4.48	4.36	4.23	4.13	4.12	4.12	-0.30	0%

JOBS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	351,735	377,335	406,280	410,017	418,132	425,845	434,147	442,824	65,489	17%
% change		7.3%	7.7%	0.9%	2.0%	1.8%	1.9%	2.0%		
King City										
Agriculture (field work)	n/a	684	774	775	778	785	791	796	112	16%
Manufacturing	n/a	265	308	309	310	312	317	322	57	22%
Site-based Skilled Trade	n/a	474	538	549	564	576	589	603	129	27%
Wholesale	n/a	1,514	1,649	1,623	1,643	1,658	1,673	1,688	174	11%
Retail	n/a	1,023	995	999	1,006	1,017	1,030	1,044	21	2%
Financial & Prof. Serv.	n/a	295	305	306	311	316	321	326	31	11%
Education	n/a	573	631	635	649	664	686	706	133	23%
Health Care & Social Assist	n/a	1,632	1,777	1,828	1,872	1,921	1,973	2,028	396	24%
Other Services	n/a	607	667	669	676	690	702	716	109	18%
Public	n/a	443	487	489	495	503	516	531	88	20%
Self-employed	n/a	63	64	66	67	69	71	72	9	14%
King City	n/a	7,573	8,195	8,248	8,371	8,511	8,669	8,832	1,259	17%
% change			8.2%	0.6%	1.5%	1.7%	1.9%	1.9%		

Important Note: Independent rounding results in some cases in which parts do not sum to the total.

Data Sources:

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Final 2022 Regional Growth Forecast

Marina

POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776	107,535	14%
% change		4.0%	1.6%	3.4%	3.0%	2.1%	1.9%	1.4%		
Marina (Total)	19,718	21,057	22,321	23,723	25,126	26,713	28,433	30,044	8,987	43%
% change		6.8%	6.0%	6.3%	5.9%	6.3%	6.4%	5.7%		
<i>Marina balance</i>	<i>19,084</i>	<i>20,037</i>	<i>21,371</i>	<i>22,293</i>	<i>22,841</i>	<i>23,238</i>	<i>23,768</i>	<i>24,237</i>	<i>4,200</i>	<i>21%</i>
<i>CSUMB</i>	<i>634</i>	<i>1,020</i>	<i>950</i>	<i>1,430</i>	<i>2,285</i>	<i>3,475</i>	<i>4,665</i>	<i>5,807</i>	<i>4,787</i>	<i>469%</i>

HOUSEHOLD POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	700,207	728,352	740,321	763,380	784,511	799,310	811,954	822,824	94,472	13%
% change		4.0%	1.6%	3.1%	2.8%	1.9%	1.6%	1.3%		
Marina (Total)	18,827	19,780	21,139	22,024	22,598	23,254	23,853	24,064	4,284	22%
% change		5.1%	6.9%	4.2%	2.6%	2.9%	2.6%	0.9%		
<i>Marina balance</i>	<i>18,827</i>	<i>19,780</i>	<i>21,139</i>	<i>22,024</i>	<i>22,564</i>	<i>22,959</i>	<i>23,480</i>	<i>23,944</i>	<i>4,164</i>	<i>21%</i>
<i>CSUMB</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>34</i>	<i>295</i>	<i>373</i>	<i>120</i>	<i>120</i>	<i>--</i>

GROUP QUARTERS POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	32,501	33,889	34,408	37,346	40,481	42,879	45,874	46,952	13,063	39%
% change		4.3%	1.5%	8.5%	8.4%	5.9%	7.0%	2.3%		
Marina (Total)	891	1,277	1,182	1,699	2,528	3,459	4,580	5,980	4,703	368%
% change		43.3%	-7.4%	43.7%	48.8%	36.8%	32.4%	30.6%		
<i>Marina balance</i>	<i>257</i>	<i>257</i>	<i>232</i>	<i>269</i>	<i>277</i>	<i>279</i>	<i>288</i>	<i>293</i>	<i>36</i>	<i>14%</i>
<i>CSUMB</i>	<i>634</i>	<i>1,020</i>	<i>950</i>	<i>1,430</i>	<i>2,251</i>	<i>3,180</i>	<i>4,292</i>	<i>5,687</i>	<i>4,667</i>	<i>458%</i>

HOUSING									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900	42,240	16%
% change		0.9%	2.0%	3.7%	3.9%	2.8%	1.7%	1.2%		
Marina (Total)	7,200	7,334	7,784	8,277	8,837	9,265	9,521	9,693	2,359	32%
% change		1.9%	6.1%	6.3%	6.8%	4.8%	2.8%	1.8%		
<i>Marina balance</i>	<i>7,200</i>	<i>7,334</i>	<i>7,784</i>	<i>8,277</i>	<i>8,832</i>	<i>9,205</i>	<i>9,445</i>	<i>9,617</i>	<i>2,283</i>	<i>31%</i>
<i>CSUMB</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>5</i>	<i>60</i>	<i>76</i>	<i>76</i>	<i>76</i>	<i>--</i>

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Marina

HOUSEHOLDS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	236,059	238,862	243,863	253,106	262,493	269,175	273,462	276,730	37,868	16%
% change		1.2%	2.1%	3.8%	3.7%	2.5%	1.6%	1.2%		
Marina (Total)	6,845	6,928	7,311	7,762	8,211	8,535	8,749	8,907	1,979	29%
% change		1.2%	5.5%	6.2%	5.8%	3.9%	2.5%	1.8%		

VACANCY RATE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	9.3%	9.1%	8.9%	8.8%	9.0%	9.2%	9.2%	9.2%	0.2	2%
Marina	4.9%	5.5%	6.1%	6.2%	7.1%	7.9%	8.1%	8.1%	2.6	46%

AVERAGE HOUSEHOLD SIZE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	2.97	3.05	3.04	3.02	2.99	2.97	2.97	2.97	-0.08	0%
Marina	2.75	2.86	2.89	2.84	2.75	2.72	2.73	2.70	-0.15	0%

JOBS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	351,735	377,335	406,280	410,017	418,132	425,845	434,147	442,824	65,489	17%
% change		7.3%	7.7%	0.9%	2.0%	1.8%	1.9%	2.0%		
Marina										
Agriculture (field work)	n/a	45	45	45	45	45	45	45	0	0%
Manufacturing	n/a	94	105	105	105	105	105	105	11	12%
Site-based Skilled Trade	n/a	1,002	1,128	1,150	1,180	1,201	1,228	1,257	255	25%
Wholesale	n/a	196	214	210	212	212	212	212	16	8%
Retail	n/a	1,063	1,034	1,038	1,046	1,056	1,066	1,076	13	1%
Financial & Prof. Serv.	n/a	381	393	395	405	415	425	435	54	14%
Education	n/a	390	430	433	443	453	474	499	109	28%
Health Care & Social Assist	n/a	566	615	635	653	672	692	712	146	26%
Other Services	n/a	1,202	1,331	1,342	1,384	1,426	1,467	1,507	305	25%
Public	n/a	827	909	914	929	944	962	982	155	19%
Self-employed	n/a	341	344	354	363	370	379	387	46	13%
Marina Total	n/a	6,107	6,548	6,621	6,765	6,899	7,055	7,217	1,110	18%
% change			7.2%	1.1%	2.2%	2.0%	2.3%	2.3%		

Important Note: Independent rounding results in some cases in which parts do not sum to the total.

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Final 2022 Regional Growth Forecast

Monterey

POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776	107,535	14%
% change		4.0%	1.6%	3.4%	3.0%	2.1%	1.9%	1.4%		
Monterey (Total)	27,810	28,086	28,170	28,044	28,650	29,032	29,342	29,639	1,553	6%
% change		1.0%	0.3%	-0.4%	2.2%	1.3%	1.1%	1.0%		
<i>Monterey balance</i>	<i>23,583</i>	<i>24,095</i>	<i>24,749</i>	<i>24,623</i>	<i>25,229</i>	<i>25,611</i>	<i>25,921</i>	<i>26,218</i>	<i>2,123</i>	<i>9%</i>
<i>DLI & Naval Postgrad</i>	<i>4,227</i>	<i>3,991</i>	<i>3,421</i>	<i>3,421</i>	<i>3,421</i>	<i>3,421</i>	<i>3,421</i>	<i>3,421</i>	<i>-570</i>	<i>-14%</i>

HOUSEHOLD POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	700,207	728,352	740,321	763,380	784,511	799,310	811,954	822,824	94,472	13%
% change		4.0%	1.6%	3.1%	2.8%	1.9%	1.6%	1.3%		
Monterey (Total)	25,307	25,605	25,637	25,511	26,117	26,499	26,809	27,106	1,501	6%
% change		1.2%	0.1%	-0.5%	2.4%	1.5%	1.2%	1.1%		
<i>Monterey balance</i>	<i>23,148</i>	<i>23,671</i>	<i>24,214</i>	<i>24,088</i>	<i>24,694</i>	<i>25,076</i>	<i>25,386</i>	<i>25,683</i>	<i>2,012</i>	<i>8%</i>
<i>DLI & Naval Postgrad</i>	<i>2,159</i>	<i>1,934</i>	<i>1,423</i>	<i>1,423</i>	<i>1,423</i>	<i>1,423</i>	<i>1,423</i>	<i>1,423</i>	<i>-511</i>	<i>-26%</i>

GROUP QUARTERS POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	32,501	33,889	34,408	37,346	40,481	42,879	45,874	46,952	13,063	39%
% change		4.3%	1.5%	8.5%	8.4%	5.9%	7.0%	2.3%		
Monterey (Total)	2,503	2,481	2,533	2,533	2,533	2,533	2,533	2,533	52	2%
% change		-0.9%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%		
<i>Monterey balance</i>	<i>435</i>	<i>424</i>	<i>535</i>	<i>535</i>	<i>535</i>	<i>535</i>	<i>535</i>	<i>535</i>	<i>111</i>	<i>26%</i>
<i>DLI & Naval Postgrad</i>	<i>2,068</i>	<i>2,057</i>	<i>1,998</i>	<i>1,998</i>	<i>1,998</i>	<i>1,998</i>	<i>1,998</i>	<i>1,998</i>	<i>-59</i>	<i>-3%</i>

HOUSING									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900	42,240	16%
% change		0.9%	2.0%	3.7%	3.9%	2.8%	1.7%	1.2%		
Monterey (Total)	13,584	13,637	13,705	13,705	13,920	14,209	14,402	14,549	912	7%
% change		0.4%	0.5%	0.0%	1.6%	2.1%	1.4%	1.0%		
<i>Monterey balance</i>	<i>13,152</i>	<i>13,205</i>	<i>13,273</i>	<i>13,273</i>	<i>13,488</i>	<i>13,777</i>	<i>13,970</i>	<i>14,117</i>	<i>912</i>	<i>7%</i>
<i>DLI & Naval Postgrad</i>	<i>432</i>	<i>432</i>	<i>432</i>	<i>432</i>	<i>432</i>	<i>432</i>	<i>432</i>	<i>432</i>	<i>0</i>	<i>0%</i>

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Monterey

HOUSEHOLDS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	236,059	238,862	243,863	253,106	262,493	269,175	273,462	276,730	37,868	16%
% change		1.2%	2.1%	3.8%	3.7%	2.5%	1.6%	1.2%		
Monterey (Total)	12,184	11,995	11,981	11,981	12,211	12,394	12,543	12,673	678	6%
% change		-1.6%	-0.1%	0.0%	1.9%	1.5%	1.2%	1.0%		

VACANCY RATE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	9.3%	9.1%	8.9%	8.8%	9.0%	9.2%	9.2%	9.2%	0.2	2%
Monterey	10.3%	12.0%	12.6%	12.6%	12.3%	12.8%	12.9%	12.9%	0.9	7%

AVERAGE HOUSEHOLD SIZE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	2.97	3.05	3.04	3.02	2.99	2.97	2.97	2.97	-0.08	0%
Monterey	2.08	2.13	2.14	2.13	2.14	2.14	2.14	2.14	0.00	0%

JOBS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	351,735	377,335	406,280	410,017	418,132	425,845	434,147	442,824	65,489	17%
% change		7.3%	7.7%	0.9%	2.0%	1.8%	1.9%	2.0%		
Monterey										
Agriculture (field work)	n/a	57	60	60	60	60	60	60	3	5%
Manufacturing	n/a	1,004	1,127	1,131	1,136	1,140	1,144	1,148	144	14%
Site-based Skilled Trade	n/a	2,758	3,104	3,163	3,232	3,281	3,351	3,417	659	24%
Wholesale	n/a	740	806	795	805	811	819	829	89	12%
Retail	n/a	4,080	3,969	3,981	4,012	4,052	4,097	4,142	62	2%
Financial & Prof. Serv.	n/a	6,372	6,575	6,625	6,783	6,958	7,134	7,312	940	15%
Education	n/a	3,082	3,419	3,431	3,507	3,582	3,672	3,770	688	22%
Health Care & Social Assist	n/a	8,335	9,061	9,360	9,622	9,879	10,146	10,425	2,090	25%
Other Services	n/a	9,037	10,007	10,086	10,403	10,696	10,991	11,289	2,252	25%
Public	n/a	1,886	2,073	2,083	2,114	2,144	2,183	2,229	343	18%
Self-employed	n/a	782	788	812	832	849	868	888	106	14%
Monterey Total	n/a	38,133	40,989	41,527	42,506	43,452	44,465	45,509	7,376	19%
% change			7.5%	1.3%	2.4%	2.2%	2.3%	2.3%		

Important Note: Independent rounding results in some cases in which parts do not sum to the total.

Data Sources:

Population and Housing 2010-2019 from California Department of Finance.

Employment 2010 and 2015 from AMBAG based on California Employment Development Dept. and InfoUSA.

All projections from 2022 Regional Growth Forecast, produced by AMBAG and PRB.

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Final 2022 Regional Growth Forecast

Pacific Grove

POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776	107,535	14%
% change		4.0%	1.6%	3.4%	3.0%	2.1%	1.9%	1.4%		
Pacific Grove	15,041	15,460	15,265	15,290	15,395	15,530	15,676	15,817	357	2%
% change		2.8%	-1.3%	0.2%	0.7%	0.9%	0.9%	0.9%		

HOUSEHOLD POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	700,207	728,352	740,321	763,380	784,511	799,310	811,954	822,824	94,472	13%
% change		4.0%	1.6%	3.1%	2.8%	1.9%	1.6%	1.3%		
Pacific Grove	14,686	15,105	14,910	14,935	15,040	15,175	15,315	15,453	348	2%
% change		2.9%	-1.3%	0.2%	0.7%	0.9%	0.9%	0.9%		

GROUP QUARTERS POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	32,501	33,889	34,408	37,346	40,481	42,879	45,874	46,952	13,063	39%
% change		4.3%	1.5%	8.5%	8.4%	5.9%	7.0%	2.3%		
Pacific Grove	355	355	355	355	355	355	361	364	9	3%
% change		0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	0.8%		

HOUSING									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900	42,240	16%
% change		0.9%	2.0%	3.7%	3.9%	2.8%	1.7%	1.2%		
Pacific Grove	8,169	8,184	8,201	8,214	8,267	8,336	8,400	8,463	279	3%
% change		0.2%	0.2%	0.2%	0.6%	0.8%	0.8%	0.8%		

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Pacific Grove

HOUSEHOLDS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	236,059	238,862	243,863	253,106	262,493	269,175	273,462	276,730	37,868	16%
% change		1.2%	2.1%	3.8%	3.7%	2.5%	1.6%	1.2%		
Pacific Grove	7,020	6,957	6,779	6,790	6,838	6,899	6,956	7,012	55	1%
% change		-0.9%	-2.6%	0.2%	0.7%	0.9%	0.8%	0.8%		

VACANCY RATE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	9.3%	9.1%	8.9%	8.8%	9.0%	9.2%	9.2%	9.2%	0.2	2%
Pacific Grove	14.1%	15.0%	17.3%	17.3%	17.3%	17.2%	17.2%	17.1%	2.2	14%

AVERAGE HOUSEHOLD SIZE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	2.97	3.05	3.04	3.02	2.99	2.97	2.97	2.97	-0.08	0%
Pacific Grove	2.09	2.17	2.20	2.20	2.20	2.20	2.20	2.20	0.03	0%

JOBS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	351,735	377,335	406,280	410,017	418,132	425,845	434,147	442,824	65,489	17%
% change		7.3%	7.7%	0.9%	2.0%	1.8%	1.9%	2.0%		
Pacific Grove	n/a	7,470	8,016	8,061	8,152	8,244	8,343	8,445	975	13%
% change			7.3%	0.6%	1.1%	1.1%	1.2%	1.2%		
Agriculture (field work)	n/a	4	4	4	4	4	4	4	0	0%
Manufacturing	n/a	75	84	84	84	84	84	84	9	12%
Site-based Skilled Trade	n/a	294	331	336	344	348	355	360	66	22%
Wholesale	n/a	90	98	98	98	98	98	98	8	9%
Retail	n/a	681	662	664	670	680	690	699	18	3%
Financial & Prof. Serv.	n/a	1,050	1,083	1,089	1,099	1,109	1,119	1,129	79	8%
Education	n/a	443	458	461	470	480	490	500	57	13%
Health Care & Social Assist	n/a	451	480	490	503	514	524	534	83	18%
Other Services	n/a	3,696	4,092	4,099	4,131	4,165	4,202	4,241	545	15%
Public	n/a	353	388	390	395	400	408	418	65	18%
Self-employed	n/a	333	336	346	354	362	369	378	45	14%

Important Note: Independent rounding results in some cases in which parts do not sum to the total.

Data Sources:

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Final 2022 Regional Growth Forecast

Salinas

POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776	107,535	14%
% change		4.0%	1.6%	3.4%	3.0%	2.1%	1.9%	1.4%		
Salinas	150,441	158,059	162,222	166,226	170,459	173,393	175,358	177,128	19,069	12%
% change		5.1%	2.6%	2.5%	2.5%	1.7%	1.1%	1.0%		

HOUSEHOLD POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	700,207	728,352	740,321	763,380	784,511	799,310	811,954	822,824	94,472	13%
% change		4.0%	1.6%	3.1%	2.8%	1.9%	1.6%	1.3%		
Salinas	147,976	155,733	160,013	163,951	168,117	171,032	172,945	174,699	18,966	12%
% change		5.2%	2.7%	2.5%	2.5%	1.7%	1.1%	1.0%		

GROUP QUARTERS POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	32,501	33,889	34,408	37,346	40,481	42,879	45,874	46,952	13,063	39%
% change		4.3%	1.5%	8.5%	8.4%	5.9%	7.0%	2.3%		
Salinas	2,465	2,326	2,209	2,275	2,342	2,361	2,413	2,429	103	4%
% change		-5.6%	-5.0%	3.0%	2.9%	0.8%	2.2%	0.7%		

HOUSING									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900	42,240	16%
% change		0.9%	2.0%	3.7%	3.9%	2.8%	1.7%	1.2%		
Salinas	42,651	43,001	43,411	45,552	48,673	50,968	52,229	53,150	10,149	24%
% change		0.8%	1.0%	4.9%	6.9%	4.7%	2.5%	1.8%		

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Salinas

HOUSEHOLDS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	236,059	238,862	243,863	253,106	262,493	269,175	273,462	276,730	37,868	16%
% change		1.2%	2.1%	3.8%	3.7%	2.5%	1.6%	1.2%		
Salinas	40,387	40,952	41,542	43,558	46,215	48,066	49,052	49,873	8,921	22%
% change		1.4%	1.4%	4.9%	6.1%	4.0%	2.1%	1.7%		

VACANCY RATE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	9.3%	9.1%	8.9%	8.8%	9.0%	9.2%	9.2%	9.2%	0.2	2%
Salinas	5.3%	4.8%	4.3%	4.4%	5.1%	5.7%	6.1%	6.2%	1.4	29%

AVERAGE HOUSEHOLD SIZE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	2.97	3.05	3.04	3.02	2.99	2.97	2.97	2.97	-0.08	0%
Salinas	3.66	3.80	3.85	3.76	3.64	3.56	3.53	3.50	-0.30	0%

JOBS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	351,735	377,335	406,280	410,017	418,132	425,845	434,147	442,824	65,489	17%
% change		7.3%	7.7%	0.9%	2.0%	1.8%	1.9%	2.0%		
Salinas										
Agriculture (field work)	n/a	7,502	8,240	8,245	8,270	8,295	8,321	8,347	845	11%
Manufacturing	n/a	1,928	2,158	2,166	2,178	2,188	2,198	2,208	280	15%
Site-based Skilled Trade	n/a	8,555	9,633	9,824	10,073	10,249	10,472	10,707	2,152	25%
Wholesale	n/a	8,580	9,347	9,203	9,316	9,403	9,488	9,575	995	12%
Retail	n/a	8,750	8,511	8,536	8,600	8,705	8,815	8,926	176	2%
Financial & Prof. Serv.	n/a	6,025	6,217	6,277	6,455	6,643	6,834	7,027	1,002	17%
Education	n/a	4,821	5,310	5,345	5,462	5,580	5,718	5,876	1,055	22%
Health Care & Social Assist	n/a	11,110	12,062	12,452	12,783	13,125	13,479	13,849	2,739	25%
Other Services	n/a	7,766	8,608	8,675	8,948	9,189	9,419	9,669	1,903	25%
Public	n/a	7,081	7,890	7,929	8,046	8,160	8,311	8,489	1,408	20%
Self-employed	n/a	891	898	925	948	968	989	1,010	119	13%
Salinas	n/a	73,009	78,874	79,577	81,079	82,505	84,044	85,683	12,674	17%
% change			8.0%	0.9%	1.9%	1.8%	1.9%	2.0%		

Important Note: Independent rounding results in some cases in which parts do not sum to the total.

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Final 2022 Regional Growth Forecast

Sand City

POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776	107,535	14%
% change		4.0%	1.6%	3.4%	3.0%	2.1%	1.9%	1.4%		
Sand City	334	361	385	430	516	756	1,012	1,198	837	232%
% change		8.1%	6.6%	11.7%	20.0%	46.5%	33.9%	18.4%		

HOUSEHOLD POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	700,207	728,352	740,321	763,380	784,511	799,310	811,954	822,824	94,472	13%
% change		4.0%	1.6%	3.1%	2.8%	1.9%	1.6%	1.3%		
Sand City	291	318	342	382	458	672	899	1,064	746	235%
% change		9.3%	7.5%	11.7%	19.9%	46.7%	33.8%	18.4%		

GROUP QUARTERS POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	32,501	33,889	34,408	37,346	40,481	42,879	45,874	46,952	13,063	39%
% change		4.3%	1.5%	8.5%	8.4%	5.9%	7.0%	2.3%		
Sand City	43	43	43	48	58	84	113	134	91	212%
% change		0.0%	0.0%	11.6%	20.8%	44.8%	34.5%	18.6%		

HOUSING									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900	42,240	16%
% change		0.9%	2.0%	3.7%	3.9%	2.8%	1.7%	1.2%		
Sand City	145	176	189	198	228	333	446	526	350	199%
% change		21.4%	7.4%	4.8%	15.2%	46.1%	33.9%	17.9%		

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Sand City

HOUSEHOLDS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	236,059	238,862	243,863	253,106	262,493	269,175	273,462	276,730	37,868	16%
% change		1.2%	2.1%	3.8%	3.7%	2.5%	1.6%	1.2%		
Sand City	128	136	144	161	193	283	379	448	312	229%
% change		6.3%	5.9%	11.8%	19.9%	46.6%	33.9%	18.2%		

VACANCY RATE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	9.3%	9.1%	8.9%	8.8%	9.0%	9.2%	9.2%	9.2%	0.2	2%
Sand City	11.7%	22.7%	23.8%	18.7%	15.4%	15.0%	15.0%	14.8%	-7.9	-35%

AVERAGE HOUSEHOLD SIZE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	2.97	3.05	3.04	3.02	2.99	2.97	2.97	2.97	-0.08	0%
Sand City	2.27	2.34	2.38	2.37	2.37	2.37	2.37	2.38	0.04	0%

JOBS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	351,735	377,335	406,280	410,017	418,132	425,845	434,147	442,824	65,489	17%
% change		7.3%	7.7%	0.9%	2.0%	1.8%	1.9%	2.0%		
Sand City										
Agriculture (field work)	n/a	0	0	0	0	0	0	0	0	--
Manufacturing	n/a	201	225	226	227	227	227	227	26	13%
Site-based Skilled Trade	n/a	393	442	446	458	468	478	488	95	24%
Wholesale	n/a	203	221	217	220	220	220	220	17	8%
Retail	n/a	582	566	568	572	577	582	587	5	1%
Financial & Prof. Serv.	n/a	106	110	112	119	126	133	140	34	32%
Education	n/a	16	18	18	20	21	22	23	7	44%
Health Care & Social Assist	n/a	52	56	57	57	58	59	60	8	15%
Other Services	n/a	346	383	386	400	413	423	433	87	25%
Public	n/a	41	45	45	50	50	51	52	11	27%
Self-employed	n/a	26	26	27	28	28	29	29	3	12%
Sand City	n/a	1,966	2,092	2,102	2,151	2,188	2,224	2,259	293	15%
% change			6.4%	0.5%	2.3%	1.7%	1.6%	1.6%		

Important Note: Independent rounding results in some cases in which parts do not sum to the total.

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Final 2022 Regional Growth Forecast

San Juan Bautista

POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776	107,535	14%
% change		4.0%	1.6%	3.4%	3.0%	2.1%	1.9%	1.4%		
San Juan Bautista	1,862	1,945	2,112	2,269	2,315	2,374	2,410	2,436	491	25%
% change		4.5%	8.6%	7.4%	2.0%	2.5%	1.5%	1.1%		

HOUSEHOLD POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	700,207	728,352	740,321	763,380	784,511	799,310	811,954	822,824	94,472	13%
% change		4.0%	1.6%	3.1%	2.8%	1.9%	1.6%	1.3%		
San Juan Bautista	1,857	1,940	2,107	2,264	2,310	2,369	2,405	2,431	491	25%
% change		4.5%	8.6%	7.5%	2.0%	2.6%	1.5%	1.1%		

GROUP QUARTERS POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	32,501	33,889	34,408	37,346	40,481	42,879	45,874	46,952	13,063	39%
% change		4.3%	1.5%	8.5%	8.4%	5.9%	7.0%	2.3%		
San Juan Bautista	5	5	5	5	5	5	5	5	0	0%
% change		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		

HOUSING									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900	42,240	16%
% change		0.9%	2.0%	3.7%	3.9%	2.8%	1.7%	1.2%		
San Juan Bautista	745	750	819	878	918	951	965	975	225	30%
% change		0.7%	9.2%	7.2%	4.6%	3.6%	1.5%	1.0%		

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Final 2022 Regional Growth Forecast

San Juan Bautista

HOUSEHOLDS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	236,059	238,862	243,863	253,106	262,493	269,175	273,462	276,730	37,868	16%
% change		1.2%	2.1%	3.8%	3.7%	2.5%	1.6%	1.2%		
San Juan Bautista	681	699	779	835	870	900	913	922	223	32%
% change		2.6%	11.4%	7.2%	4.2%	3.4%	1.4%	1.0%		

VACANCY RATE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	9.3%	9.1%	8.9%	8.8%	9.0%	9.2%	9.2%	9.2%	0.2	2%
San Juan Bautista	8.6%	6.8%	4.9%	4.9%	5.2%	5.4%	5.4%	5.4%	-1.4	-20%

AVERAGE HOUSEHOLD SIZE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	2.97	3.05	3.04	3.02	2.99	2.97	2.97	2.97	-0.08	0%
San Juan Bautista	2.73	2.78	2.70	2.71	2.66	2.63	2.63	2.64	-0.14	0%

JOBS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	351,735	377,335	406,280	410,017	418,132	425,845	434,147	442,824	65,489	17%
% change		7.3%	7.7%	0.9%	2.0%	1.8%	1.9%	2.0%		
San Juan Bautista										
Agriculture (field work)	n/a	38	42	42	42	42	42	42	4	11%
Manufacturing	n/a	14	16	16	16	16	16	16	2	14%
Site-based Skilled Trade	n/a	23	26	26	26	26	26	26	3	13%
Wholesale	n/a	6	7	7	7	8	10	10	4	67%
Retail	n/a	38	37	37	37	38	43	46	8	21%
Financial & Prof. Serv.	n/a	64	66	66	66	66	67	67	3	5%
Education	n/a	60	66	66	66	66	67	67	7	12%
Health Care & Social Assist	n/a	13	14	24	29	29	29	29	16	123%
Other Services	n/a	195	216	217	222	227	232	237	42	22%
Public	n/a	29	32	32	32	32	32	32	3	10%
Self-employed	n/a	35	35	36	37	38	39	40	5	14%
San Juan Bautista	n/a	515	557	569	580	588	603	612	97	19%
% change			8.2%	2.2%	1.9%	1.4%	2.6%	1.5%		

Important Note: Independent rounding results in some cases in which parts do not sum to the total.

Data Sources:

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Final 2022 Regional Growth Forecast

Santa Cruz

POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776	107,535	14%
% change		4.0%	1.6%	3.4%	3.0%	2.1%	1.9%	1.4%		
Santa Cruz (Total)	59,946	64,223	64,424	68,845	72,218	75,257	78,828	79,534	15,311	24%
% change		7.1%	0.3%	6.9%	4.9%	4.2%	4.7%	0.9%		
<i>Santa Cruz balance</i>	43,614	46,947	45,324	47,845	49,118	49,957	50,828	51,534	4,587	10%
<i>UCSC</i>	16,332	17,276	19,100	21,000	23,100	25,300	28,000	28,000	10,724	62%

HOUSEHOLD POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	700,207	728,352	740,321	763,380	784,511	799,310	811,954	822,824	94,472	13%
% change		4.0%	1.6%	3.1%	2.8%	1.9%	1.6%	1.3%		
Santa Cruz (Total)	51,657	53,432	53,299	55,335	56,552	57,374	58,192	58,877	5,445	10%
% change		3.4%	-0.2%	3.8%	2.2%	1.5%	1.4%	1.2%		
<i>Santa Cruz balance</i>	41,829	45,190	43,949	45,985	47,202	48,024	48,842	49,527	4,337	10%
<i>UCSC</i>	9,828	8,242	9,350	9,350	9,350	9,350	9,350	9,350	1,108	13%

GROUP QUARTERS POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	32,501	33,889	34,408	37,346	40,481	42,879	45,874	46,952	13,063	39%
% change		4.3%	1.5%	8.5%	8.4%	5.9%	7.0%	2.3%		
Santa Cruz (Total)	8,289	10,791	11,125	13,510	15,666	17,883	20,636	20,657	9,866	91%
% change		30.2%	3.1%	21.4%	16.0%	14.2%	15.4%	0.1%		
<i>Santa Cruz balance</i>	1,785	1,757	1,375	1,860	1,916	1,933	1,986	2,007	250	14%
<i>UCSC</i>	6,504	9,034	9,750	11,650	13,750	15,950	18,650	18,650	9,616	106%

HOUSING									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900	42,240	16%
% change		0.9%	2.0%	3.7%	3.9%	2.8%	1.7%	1.2%		
Santa Cruz (Total)	23,316	23,535	23,954	24,988	25,578	25,974	26,295	26,525	2,990	13%
% change		0.9%	1.8%	4.3%	2.4%	1.5%	1.2%	0.9%		
<i>Santa Cruz balance</i>	23,316	23,005	23,424	24,422	24,970	25,342	25,663	25,892	2,887	13%
<i>UCSC</i>	0	530	530	566	608	632	632	633	103	19%

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Santa Cruz

HOUSEHOLDS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	236,059	238,862	243,863	253,106	262,493	269,175	273,462	276,730	37,868	16%
% change		1.2%	2.1%	3.8%	3.7%	2.5%	1.6%	1.2%		
Santa Cruz (Total)	21,657	22,039	22,608	23,552	24,084	24,422	24,706	24,923	2,884	13%
% change		1.8%	2.6%	4.2%	2.3%	1.4%	1.2%	0.9%		

VACANCY RATE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	9.3%	9.1%	8.9%	8.8%	9.0%	9.2%	9.2%	9.2%	0.2	2%
Santa Cruz	7.1%	6.4%	5.6%	5.7%	5.8%	6.0%	6.0%	6.0%	-0.3	-5%

AVERAGE HOUSEHOLD SIZE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	2.97	3.05	3.04	3.02	2.99	2.97	2.97	2.97	-0.08	0%
Santa Cruz	2.39	2.42	2.36	2.35	2.35	2.35	2.36	2.36	-0.06	0%

JOBS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	351,735	377,335	406,280	410,017	418,132	425,845	434,147	442,824	65,489	17%
% change		7.3%	7.7%	0.9%	2.0%	1.8%	1.9%	2.0%		
Santa Cruz										
Agriculture (field work)	n/a	121	126	126	126	126	126	126	5	4%
Manufacturing	n/a	2,367	2,647	2,657	2,667	2,680	2,694	2,708	341	14%
Site-based Skilled Trade	n/a	2,235	2,515	2,570	2,685	2,780	2,889	3,002	767	34%
Wholesale	n/a	1,197	1,304	1,286	1,316	1,344	1,365	1,390	193	16%
Retail	n/a	5,314	5,169	5,184	5,224	5,284	5,334	5,394	80	2%
Financial & Prof. Serv.	n/a	4,305	4,443	4,478	4,673	4,864	5,054	5,254	949	22%
Education	n/a	6,183	6,810	6,863	7,058	7,256	7,484	7,742	1,559	25%
Health Care & Social Assist	n/a	3,844	4,173	4,309	4,475	4,643	4,819	5,002	1,158	30%
Other Services	n/a	7,541	8,350	8,423	8,803	9,183	9,568	9,957	2,416	32%
Public	n/a	5,691	6,271	6,302	6,395	6,485	6,604	6,746	1,055	19%
Self-employed	n/a	2,042	2,057	2,119	2,172	2,218	2,266	2,315	273	13%
Santa Cruz Total	n/a	40,840	43,865	44,317	45,594	46,863	48,203	49,636	8,796	22%
% change			7.4%	1.0%	2.9%	2.8%	2.9%	3.0%		

Important Note: Independent rounding results in some cases in which parts do not sum to the total.

Data Sources:

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Scotts Valley

POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776	107,535	14%
% change		4.0%	1.6%	3.4%	3.0%	2.1%	1.9%	1.4%		
Scotts Valley	11,580	11,946	11,693	11,718	11,837	11,867	11,868	12,010	64	1%
% change		3.2%	-2.1%	0.2%	1.0%	0.3%	0.0%	1.2%		

HOUSEHOLD POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	700,207	728,352	740,321	763,380	784,511	799,310	811,954	822,824	94,472	13%
% change		4.0%	1.6%	3.1%	2.8%	1.9%	1.6%	1.3%		
Scotts Valley	11,308	11,674	11,421	11,446	11,562	11,592	11,591	11,731	57	0%
% change		3.2%	-2.2%	0.2%	1.0%	0.3%	0.0%	1.2%		

GROUP QUARTERS POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	32,501	33,889	34,408	37,346	40,481	42,879	45,874	46,952	13,063	39%
% change		4.3%	1.5%	8.5%	8.4%	5.9%	7.0%	2.3%		
Scotts Valley	272	272	272	272	275	275	277	279	7	3%
% change		0.0%	0.0%	0.0%	1.1%	0.0%	0.7%	0.7%		

HOUSING									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900	42,240	16%
% change		0.9%	2.0%	3.7%	3.9%	2.8%	1.7%	1.2%		
Scotts Valley	4,610	4,691	4,739	4,798	4,846	4,869	4,887	4,930	239	5%
% change		1.8%	1.0%	1.2%	1.0%	0.5%	0.4%	0.9%		

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Scotts Valley

HOUSEHOLDS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	236,059	238,862	243,863	253,106	262,493	269,175	273,462	276,730	37,868	16%
% change		1.2%	2.1%	3.8%	3.7%	2.5%	1.6%	1.2%		
Scotts Valley	4,426	4,494	4,522	4,577	4,623	4,635	4,650	4,691	197	4%
% change		1.5%	0.6%	1.2%	1.0%	0.3%	0.3%	0.9%		

VACANCY RATE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	9.3%	9.1%	8.9%	8.8%	9.0%	9.2%	9.2%	9.2%	0.2	2%
Scotts Valley	4.0%	4.2%	4.6%	4.6%	4.6%	4.8%	4.8%	4.8%	0.6	15%

AVERAGE HOUSEHOLD SIZE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	2.97	3.05	3.04	3.02	2.99	2.97	2.97	2.97	-0.08	0%
Scotts Valley	2.55	2.60	2.53	2.50	2.50	2.50	2.49	2.50	-0.10	0%

JOBS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	351,735	377,335	406,280	410,017	418,132	425,845	434,147	442,824	65,489	17%
% change		7.3%	7.7%	0.9%	2.0%	1.8%	1.9%	2.0%		
Scotts Valley	n/a	9,458	10,109	10,185	10,345	10,489	10,637	10,797	1,339	14%
% change			6.9%	0.8%	1.6%	1.4%	1.4%	1.5%		
Agriculture (field work)	n/a	5	5	5	5	5	5	5	0	0%
Manufacturing	n/a	1,903	2,126	2,134	2,146	2,156	2,166	2,176	273	14%
Site-based Skilled Trade	n/a	522	587	598	613	623	637	652	130	25%
Wholesale	n/a	675	735	724	733	738	743	748	73	11%
Retail	n/a	1,523	1,481	1,485	1,495	1,510	1,525	1,543	20	1%
Financial & Prof. Serv.	n/a	1,583	1,634	1,647	1,679	1,714	1,749	1,783	200	13%
Education	n/a	384	423	426	436	446	456	471	87	23%
Health Care & Social Assist	n/a	530	576	596	612	627	642	661	131	25%
Other Services	n/a	1,720	1,904	1,919	1,960	1,990	2,020	2,050	330	19%
Public	n/a	224	246	247	252	257	262	267	43	19%
Self-employed	n/a	389	392	404	414	423	432	441	52	13%

Important Note: Independent rounding results in some cases in which parts do not sum to the total.

Data Sources:

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Seaside

POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776	107,535	14%
% change		4.0%	1.6%	3.4%	3.0%	2.1%	1.9%	1.4%		
Seaside (Total)	33,025	33,815	33,537	34,497	35,107	35,634	36,582	38,316	4,501	13%
% change		2.4%	-0.8%	2.9%	1.8%	1.5%	2.7%	4.7%		
Seaside balance	26,836	25,835	26,345	27,285	27,850	28,317	29,205	30,881	5,046	20%
Fort Ord	4,473	4,163	3,083	3,083	3,083	3,083	3,083	3,083	-1,080	-26%
CSUMB	1,716	3,817	4,109	4,129	4,174	4,234	4,294	4,352	535	14%

HOUSEHOLD POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	700,207	728,352	740,321	763,380	784,511	799,310	811,954	822,824	94,472	13%
% change		4.0%	1.6%	3.1%	2.8%	1.9%	1.6%	1.3%		
Seaside (Total)	31,898	32,505	31,854	32,814	33,405	33,907	34,827	36,531	4,026	12%
% change		1.9%	-2.0%	3.0%	1.8%	1.5%	2.7%	4.9%		
Seaside balance	26,685	25,684	26,192	27,130	27,692	28,157	29,039	30,706	5,022	20%
Fort Ord	4,473	4,163	3,083	3,083	3,083	3,083	3,083	3,083	-1,080	-26%
CSUMB	740	2,658	2,579	2,601	2,630	2,667	2,705	2,742	84	3%

GROUP QUARTERS POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	32,501	33,889	34,408	37,346	40,481	42,879	45,874	46,952	13,063	39%
% change		4.3%	1.5%	8.5%	8.4%	5.9%	7.0%	2.3%		
Seaside (Total)	1,127	1,310	1,683	1,683	1,702	1,727	1,755	1,785	475	36%
% change		16.2%	28.5%	0.0%	1.1%	1.5%	1.6%	1.7%		
Seaside balance	151	151	153	155	158	160	166	175	24	16%
Fort Ord	0	0	0	0	0	0	0	0	0	--
CSUMB	976	1,159	1,530	1,528	1,544	1,567	1,589	1,610	451	39%

HOUSING									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900	42,240	16%
% change		0.9%	2.0%	3.7%	3.9%	2.8%	1.7%	1.2%		
Seaside (Total)	10,872	10,913	10,920	11,437	11,925	12,248	12,604	13,192	2,279	21%
% change		0.4%	0.1%	4.7%	4.3%	2.7%	2.9%	4.7%		
Seaside balance	9,507	8,908	8,942	9,429	9,888	10,190	10,531	11,107	2,199	25%
Fort Ord	1,119	1,119	1,119	1,119	1,119	1,119	1,119	1,119	0	0%
CSUMB	246	886	859	889	918	939	954	966	80	9%

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Seaside

HOUSEHOLDS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	236,059	238,862	243,863	253,106	262,493	269,175	273,462	276,730	37,868	16%
% change		1.2%	2.1%	3.8%	3.7%	2.5%	1.6%	1.2%		
Seaside (Total)	10,093	10,023	9,870	10,323	10,723	10,979	11,289	11,826	1,803	18%
% change		-0.7%	-1.5%	4.6%	3.9%	2.4%	2.8%	4.8%		

VACANCY RATE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	9.3%	9.1%	8.9%	8.8%	9.0%	9.2%	9.2%	9.2%	0.2	2%
Seaside	7.2%	8.2%	9.6%	9.7%	10.1%	10.4%	10.4%	10.4%	2.2	27%

AVERAGE HOUSEHOLD SIZE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	2.97	3.05	3.04	3.02	2.99	2.97	2.97	2.97	-0.08	0%
Seaside	3.16	3.24	3.23	3.18	3.12	3.09	3.09	3.09	-0.15	0%

JOBS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	351,735	377,335	406,280	410,017	418,132	425,845	434,147	442,824	65,489	17%
% change		7.3%	7.7%	0.9%	2.0%	1.8%	1.9%	2.0%		
Seaside										
Agriculture (field work)	n/a	0	0	0	0	0	0	0	0	--
Manufacturing	n/a	105	117	117	117	117	117	117	12	11%
Site-based Skilled Trade	n/a	599	674	690	709	722	739	756	157	26%
Wholesale	n/a	169	184	180	181	181	181	181	12	7%
Retail	n/a	1,835	1,785	1,790	1,804	1,824	1,844	1,864	29	2%
Financial & Prof. Serv.	n/a	403	415	417	434	455	475	494	91	23%
Education	n/a	1,054	1,166	1,173	1,197	1,221	1,244	1,269	215	20%
Health Care & Social Assist	n/a	815	896	927	952	977	1,002	1,030	215	26%
Other Services	n/a	1,822	2,017	2,037	2,105	2,170	2,235	2,303	481	26%
Public	n/a	2,358	2,711	2,732	2,795	2,844	2,890	2,954	596	25%
Self-employed	n/a	507	511	526	539	551	563	575	68	13%
Seaside Total	n/a	9,667	10,476	10,589	10,833	11,062	11,290	11,543	1,876	19%
% change			8.4%	1.1%	2.3%	2.1%	2.1%	2.2%		

Important Note: Independent rounding results in some cases in which parts do not sum to the total.

Data Sources:

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Final 2022 Regional Growth Forecast

Soledad

POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776	107,535	14%
% change		4.0%	1.6%	3.4%	3.0%	2.1%	1.9%	1.4%		
Soledad (Total)	25,738	24,597	25,301	26,112	26,824	27,697	28,419	29,133	4,536	18%
% change		-4.4%	2.9%	3.2%	2.7%	3.3%	2.6%	2.5%		
<i>Soledad balance</i>	<i>15,690</i>	<i>16,298</i>	<i>17,190</i>	<i>18,001</i>	<i>18,713</i>	<i>19,586</i>	<i>20,308</i>	<i>21,022</i>	<i>4,724</i>	<i>29%</i>
<i>SVSP & CTF</i>	<i>10,048</i>	<i>8,299</i>	<i>8,111</i>	<i>8,111</i>	<i>8,111</i>	<i>8,111</i>	<i>8,111</i>	<i>8,111</i>	<i>-188</i>	<i>-2%</i>

HOUSEHOLD POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	700,207	728,352	740,321	763,380	784,511	799,310	811,954	822,824	94,472	13%
% change		4.0%	1.6%	3.1%	2.8%	1.9%	1.6%	1.3%		
Soledad (Total)	15,635	16,243	17,135	17,944	18,653	19,524	20,243	20,955	4,712	29%
% change		3.9%	5.5%	4.7%	4.0%	4.7%	3.7%	3.5%		
<i>Soledad balance</i>	<i>15,635</i>	<i>16,243</i>	<i>17,135</i>	<i>17,944</i>	<i>18,653</i>	<i>19,524</i>	<i>20,243</i>	<i>20,955</i>	<i>4,712</i>	<i>29%</i>
<i>SVSP & CTF</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>--</i>

GROUP QUARTERS POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	32,501	33,889	34,408	37,346	40,481	42,879	45,874	46,952	13,063	39%
% change		4.3%	1.5%	8.5%	8.4%	5.9%	7.0%	2.3%		
Soledad (Total)	10,103	8,354	8,166	8,168	8,171	8,173	8,176	8,178	-176	-2%
% change		-17.3%	-2.3%	0.0%	0.0%	0.0%	0.0%	0.0%		
<i>Soledad balance</i>	<i>55</i>	<i>55</i>	<i>55</i>	<i>57</i>	<i>60</i>	<i>62</i>	<i>65</i>	<i>67</i>	<i>12</i>	<i>22%</i>
<i>SVSP & CTF</i>	<i>10,048</i>	<i>8,299</i>	<i>8,111</i>	<i>8,111</i>	<i>8,111</i>	<i>8,111</i>	<i>8,111</i>	<i>8,111</i>	<i>-188</i>	<i>-2%</i>

HOUSING									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900	42,240	16%
% change		0.9%	2.0%	3.7%	3.9%	2.8%	1.7%	1.2%		
Soledad (Total)	3,876	3,927	4,137	4,433	4,733	5,024	5,240	5,426	1,499	38%
% change		1.3%	5.3%	7.2%	6.8%	6.1%	4.3%	3.5%		
<i>Soledad balance</i>	<i>3,876</i>	<i>3,927</i>	<i>4,137</i>	<i>4,433</i>	<i>4,733</i>	<i>5,024</i>	<i>5,240</i>	<i>5,426</i>	<i>1,499</i>	<i>38%</i>
<i>SVSP & CTF</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>--</i>

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Final 2022 Regional Growth Forecast

Soledad

HOUSEHOLDS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	236,059	238,862	243,863	253,106	262,493	269,175	273,462	276,730	37,868	16%
% change		1.2%	2.1%	3.8%	3.7%	2.5%	1.6%	1.2%		
Soledad (Total)	3,664	3,668	3,820	4,085	4,360	4,628	4,825	4,997	1,329	36%
% change		0.1%	4.1%	6.9%	6.7%	6.1%	4.3%	3.6%		

VACANCY RATE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	9.3%	9.1%	8.9%	8.8%	9.0%	9.2%	9.2%	9.2%	0.2	2%
Soledad	5.5%	6.6%	7.7%	7.9%	7.9%	7.9%	7.9%	7.9%	1.3	20%

AVERAGE HOUSEHOLD SIZE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	2.97	3.05	3.04	3.02	2.99	2.97	2.97	2.97	-0.08	0%
Soledad	4.27	4.43	4.49	4.39	4.28	4.22	4.20	4.19	-0.23	0%

JOBS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	351,735	377,335	406,280	410,017	418,132	425,845	434,147	442,824	65,489	17%
% change		7.3%	7.7%	0.9%	2.0%	1.8%	1.9%	2.0%		
Soledad										
Agriculture (field work)	n/a	1,729	1,833	1,834	1,836	1,838	1,841	1,843	114	7%
Manufacturing	n/a	293	315	316	317	317	317	317	24	8%
Site-based Skilled Trade	n/a	1,638	1,833	1,868	1,899	1,916	1,943	1,972	334	20%
Wholesale	n/a	219	239	235	239	239	239	239	20	9%
Retail	n/a	297	289	290	291	296	301	306	9	3%
Financial & Prof. Serv.	n/a	183	189	190	194	198	202	206	23	13%
Education	n/a	517	569	573	581	590	600	610	93	18%
Health Care & Social Assist	n/a	584	622	642	655	669	683	698	114	20%
Other Services	n/a	433	479	482	491	500	508	518	85	20%
Public	n/a	2,498	2,500	2,503	2,509	2,519	2,544	2,593	95	4%
Self-employed	n/a	141	142	146	149	153	155	160	19	13%
Soledad Total	n/a	8,532	9,010	9,079	9,161	9,235	9,333	9,462	930	11%
% change			5.6%	0.8%	0.9%	0.8%	1.1%	1.4%		

Important Note: Independent rounding results in some cases in which parts do not sum to the total.

Data Sources:

Population and Housing 2010-2019 from California Department of Finance.

Employment 2010 and 2015 from AMBAG based on California Employment Development Dept. and InfoUSA.

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Final 2022 Regional Growth Forecast

Unincorporated Monterey

POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776	107,535	14%
% change		4.0%	1.6%	3.4%	3.0%	2.1%	1.9%	1.4%		
Unincorporated Monterey ('	100,213	104,009	106,744	108,432	109,976	110,170	110,277	110,326	6,317	6%
% change		3.8%	2.6%	1.6%	1.4%	0.2%	0.1%	0.0%		
<i>Unincorporated Monterey balance</i>	<i>97,672</i>	<i>101,468</i>	<i>104,203</i>	<i>105,891</i>	<i>107,435</i>	<i>107,629</i>	<i>107,736</i>	<i>107,785</i>	<i>6,317</i>	<i>6%</i>
<i>CSUMB</i>	<i>2,541</i>	<i>2,541</i>	<i>2,541</i>	<i>2,541</i>	<i>2,541</i>	<i>2,541</i>	<i>2,541</i>	<i>2,541</i>	<i>0</i>	<i>0%</i>

HOUSEHOLD POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	700,207	728,352	740,321	763,380	784,511	799,310	811,954	822,824	94,472	13%
% change		4.0%	1.6%	3.1%	2.8%	1.9%	1.6%	1.3%		
Unincorporated Monterey ('	96,551	100,347	103,082	104,865	106,413	107,446	108,589	109,070	8,723	9%
% change		3.9%	2.7%	1.7%	1.5%	1.0%	1.1%	0.4%		
<i>Unincorporated Monterey balance</i>	<i>96,551</i>	<i>100,347</i>	<i>103,082</i>	<i>104,763</i>	<i>106,286</i>	<i>106,480</i>	<i>106,582</i>	<i>106,631</i>	<i>6,284</i>	<i>6%</i>
<i>CSUMB</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>102</i>	<i>127</i>	<i>966</i>	<i>2,007</i>	<i>2,439</i>	<i>2,439</i>	<i>--</i>

GROUP QUARTERS POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	32,501	33,889	34,408	37,346	40,481	42,879	45,874	46,952	13,063	39%
% change		4.3%	1.5%	8.5%	8.4%	5.9%	7.0%	2.3%		
Unincorporated Monterey ('	3,662	3,662	3,662	3,567	3,563	2,724	1,688	1,256	-2,406	-66%
% change		0.0%	0.0%	-2.6%	-0.1%	-23.5%	-38.0%	-25.6%		
<i>Unincorporated Monterey balance</i>	<i>1,121</i>	<i>1,121</i>	<i>1,121</i>	<i>1,128</i>	<i>1,149</i>	<i>1,149</i>	<i>1,154</i>	<i>1,154</i>	<i>33</i>	<i>3%</i>
<i>CSUMB</i>	<i>2,541</i>	<i>2,541</i>	<i>2,541</i>	<i>2,439</i>	<i>2,414</i>	<i>1,575</i>	<i>534</i>	<i>102</i>	<i>-2,439</i>	<i>-96%</i>

HOUSING									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900	42,240	16%
% change		0.9%	2.0%	3.7%	3.9%	2.8%	1.7%	1.2%		
Unincorporated Monterey ('	38,296	38,783	39,839	40,271	40,620	40,908	41,271	41,408	2,625	7%
% change		1.3%	2.7%	1.1%	0.9%	0.7%	0.9%	0.3%		
<i>Unincorporated Monterey balance</i>	<i>38,296</i>	<i>38,783</i>	<i>39,839</i>	<i>40,238</i>	<i>40,569</i>	<i>40,592</i>	<i>40,616</i>	<i>40,616</i>	<i>1,833</i>	<i>5%</i>
<i>CSUMB</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>33</i>	<i>51</i>	<i>316</i>	<i>655</i>	<i>792</i>	<i>792</i>	<i>--</i>

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Final 2022 Regional Growth Forecast

Unincorporated Monterey

HOUSEHOLDS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	236,059	238,862	243,863	253,106	262,493	269,175	273,462	276,730	37,868	16%
% change		1.2%	2.1%	3.8%	3.7%	2.5%	1.6%	1.2%		
Unincorporated Monterey (	33,408	33,435	33,922	34,491	34,904	35,246	35,616	35,777	2,342	7%
% change		0.1%	1.5%	1.7%	1.2%	1.0%	1.0%	0.5%		

VACANCY RATE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	9.3%	9.1%	8.9%	8.8%	9.0%	9.2%	9.2%	9.2%	0.2	2%
Unincorporated Monterey	12.8%	13.8%	14.9%	14.4%	14.1%	13.8%	13.7%	13.6%	-0.2	-1%

AVERAGE HOUSEHOLD SIZE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	2.97	3.05	3.04	3.02	2.99	2.97	2.97	2.97	-0.08	0%
Unincorporated Monterey	2.89	3.00	3.04	3.04	3.05	3.05	3.05	3.05	0.05	0%

JOBS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	351,735	377,335	406,280	410,017	418,132	425,845	434,147	442,824	65,489	17%
% change		7.3%	7.7%	0.9%	2.0%	1.8%	1.9%	2.0%		
Unincorporated Monterey										
Agriculture (field work)	n/a	10,802	11,853	11,860	11,899	11,938	11,977	12,018	1,216	11%
Manufacturing	n/a	2,227	2,488	2,495	2,510	2,525	2,540	2,555	328	15%
Site-based Skilled Trade	n/a	6,850	7,709	7,827	7,976	8,065	8,191	8,325	1,475	22%
Wholesale	n/a	7,978	8,691	8,525	8,578	8,606	8,635	8,665	687	9%
Retail	n/a	4,979	4,843	4,851	4,884	4,932	4,987	5,043	64	1%
Financial & Prof. Serv.	n/a	4,390	4,530	4,566	4,695	4,834	4,977	5,120	730	17%
Education	n/a	2,843	3,131	3,151	3,222	3,292	3,374	3,469	626	22%
Health Care & Social Assist	n/a	2,345	2,546	2,627	2,697	2,770	2,844	2,923	578	25%
Other Services	n/a	9,374	10,380	10,462	10,791	11,096	11,402	11,712	2,338	25%
Public	n/a	1,295	1,423	1,430	1,451	1,471	1,497	1,528	233	18%
Self-employed	n/a	2,679	2,699	2,780	2,850	2,910	2,972	3,037	358	13%
Unincorporated Monterey	n/a	55,762	60,293	60,574	61,553	62,439	63,396	64,395	8,633	15%
% change			8.1%	0.5%	1.6%	1.4%	1.5%	1.6%		

Important Note: Independent rounding results in some cases in which parts do not sum to the total.

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November 11, 2020

Final 2022 Regional Growth Forecast

Unincorporated San Benito

POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776	107,535	14%
% change		4.0%	1.6%	3.4%	3.0%	2.1%	1.9%	1.4%		
Unincorporated San Benito	18,479	18,879	19,595	24,451	28,136	30,843	33,033	35,331	16,452	87%
% change		2.2%	3.8%	24.8%	15.1%	9.6%	7.1%	7.0%		

HOUSEHOLD POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	700,207	728,352	740,321	763,380	784,511	799,310	811,954	822,824	94,472	13%
% change		4.0%	1.6%	3.1%	2.8%	1.9%	1.6%	1.3%		
Unincorporated San Benito	18,310	18,710	19,400	24,237	27,912	30,610	32,793	35,086	16,376	88%
% change		2.2%	3.7%	24.9%	15.2%	9.7%	7.1%	7.0%		

GROUP QUARTERS POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	32,501	33,889	34,408	37,346	40,481	42,879	45,874	46,952	13,063	39%
% change		4.3%	1.5%	8.5%	8.4%	5.9%	7.0%	2.3%		
Unincorporated San Benito	169	169	195	214	224	233	240	245	76	45%
% change		0.0%	15.4%	9.7%	4.7%	4.0%	3.0%	2.1%		

HOUSING									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900	42,240	16%
% change		0.9%	2.0%	3.7%	3.9%	2.8%	1.7%	1.2%		
Unincorporated San Benito	6,724	6,755	7,177	8,342	9,238	10,121	10,433	10,678	3,923	58%
% change		0.5%	6.2%	16.2%	10.7%	9.6%	3.1%	2.3%		

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Final 2022 Regional Growth Forecast

Unincorporated San Benito

HOUSEHOLDS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	236,059	238,862	243,863	253,106	262,493	269,175	273,462	276,730	37,868	16%
% change		1.2%	2.1%	3.8%	3.7%	2.5%	1.6%	1.2%		
Unincorporated San Benito	6,264	6,299	6,695	7,909	8,799	9,665	9,997	10,216	3,917	62%
% change		0.6%	6.3%	18.1%	11.3%	9.8%	3.4%	2.2%		

VACANCY RATE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	9.3%	9.1%	8.9%	8.8%	9.0%	9.2%	9.2%	9.2%	0.2	2%
Unincorporated San Benito	6.8%	6.8%	6.7%	5.2%	4.8%	4.5%	4.2%	4.3%	-2.4	-36%

AVERAGE HOUSEHOLD SIZE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	2.97	3.05	3.04	3.02	2.99	2.97	2.97	2.97	-0.08	0%
Unincorporated San Benito	2.92	2.97	2.90	3.06	3.17	3.17	3.28	3.43	0.46	0%

JOBS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	351,735	377,335	406,280	410,017	418,132	425,845	434,147	442,824	65,489	17%
% change		7.3%	7.7%	0.9%	2.0%	1.8%	1.9%	2.0%		
Unincorporated San Benito										
Agriculture (field work)	n/a	1,405	1,539	1,540	1,545	1,550	1,555	1,560	155	11%
Manufacturing	n/a	895	990	994	1,001	1,007	1,013	1,019	124	14%
Site-based Skilled Trade	n/a	830	934	955	979	995	1,022	1,049	219	26%
Wholesale	n/a	593	644	633	640	645	650	655	62	10%
Retail	n/a	279	271	273	275	280	285	292	13	5%
Financial & Prof. Serv.	n/a	1,450	1,496	1,509	1,551	1,596	1,641	1,686	236	16%
Education	n/a	215	237	249	257	264	275	285	70	33%
Health Care & Social Assist	n/a	98	109	114	119	129	142	157	59	60%
Other Services	n/a	452	500	503	523	543	578	591	139	31%
Public	n/a	210	231	234	248	267	301	311	101	48%
Self-employed	n/a	261	263	271	278	283	289	296	35	13%
Unincorporated San Benito	n/a	6,688	7,214	7,275	7,416	7,559	7,751	7,901	1,213	18%
% change			7.9%	0.8%	1.9%	1.9%	2.5%	1.9%		

Important Note: Independent rounding results in some cases in which parts do not sum to the total.

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November 11, 2020

Final 2022 Regional Growth Forecast

Unincorporated Santa Cruz

POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776	107,535	14%
% change		4.0%	1.6%	3.4%	3.0%	2.1%	1.9%	1.4%		
Unincorporated Santa Cruz	129,739	134,990	133,493	134,675	135,027	135,304	135,625	135,953	963	1%
% change		4.0%	-1.1%	0.9%	0.3%	0.2%	0.2%	0.2%		

HOUSEHOLD POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	700,207	728,352	740,321	763,380	784,511	799,310	811,954	822,824	94,472	13%
% change		4.0%	1.6%	3.1%	2.8%	1.9%	1.6%	1.3%		
Unincorporated Santa Cruz	128,007	133,153	131,669	132,836	133,175	133,452	133,764	134,089	936	1%
% change		4.0%	-1.1%	0.9%	0.3%	0.2%	0.2%	0.2%		

GROUP QUARTERS POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	32,501	33,889	34,408	37,346	40,481	42,879	45,874	46,952	13,063	39%
% change		4.3%	1.5%	8.5%	8.4%	5.9%	7.0%	2.3%		
Unincorporated Santa Cruz	1,732	1,837	1,824	1,839	1,852	1,852	1,861	1,864	27	1%
% change		6.1%	-0.7%	0.8%	0.7%	0.0%	0.5%	0.2%		

HOUSING									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900	42,240	16%
% change		0.9%	2.0%	3.7%	3.9%	2.8%	1.7%	1.2%		
Unincorporated Santa Cruz	56,927	57,327	57,662	58,807	59,178	59,519	59,697	59,806	2,479	4%
% change		0.7%	0.6%	2.0%	0.6%	0.6%	0.3%	0.2%		

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Final 2022 Regional Growth Forecast

Unincorporated Santa Cruz

HOUSEHOLDS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	236,059	238,862	243,863	253,106	262,493	269,175	273,462	276,730	37,868	16%
% change		1.2%	2.1%	3.8%	3.7%	2.5%	1.6%	1.2%		
Unincorporated Santa Cruz	50,118	51,288	52,156	53,141	53,330	53,494	53,619	53,723	2,435	5%
% change		2.3%	1.7%	1.9%	0.4%	0.3%	0.2%	0.2%		

VACANCY RATE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	9.3%	9.1%	8.9%	8.8%	9.0%	9.2%	9.2%	9.2%	0.2	2%
Unincorporated Santa Cruz	12.0%	10.5%	9.5%	9.6%	9.9%	10.1%	10.2%	10.2%	-0.4	-3%

AVERAGE HOUSEHOLD SIZE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	2.97	3.05	3.04	3.02	2.99	2.97	2.97	2.97	-0.08	0%
Unincorporated Santa Cruz	2.55	2.60	2.52	2.50	2.50	2.49	2.49	2.50	-0.10	0%

JOBS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	351,735	377,335	406,280	410,017	418,132	425,845	434,147	442,824	65,489	17%
% change		7.3%	7.7%	0.9%	2.0%	1.8%	1.9%	2.0%		
Unincorporated Santa Cruz										
Agriculture (field work)	n/a	2,836	3,106	3,108	3,118	3,128	3,138	3,148	312	11%
Manufacturing	n/a	2,393	2,674	2,684	2,700	2,715	2,730	2,745	352	15%
Site-based Skilled Trade	n/a	2,926	3,293	3,353	3,412	3,446	3,496	3,549	623	21%
Wholesale	n/a	3,876	4,222	4,155	4,196	4,231	4,271	4,311	435	11%
Retail	n/a	3,164	3,078	3,087	3,110	3,145	3,180	3,215	51	2%
Financial & Prof. Serv.	n/a	3,329	3,434	3,460	3,532	3,609	3,689	3,768	439	13%
Education	n/a	3,165	3,486	3,504	3,556	3,607	3,673	3,748	583	18%
Health Care & Social Assist	n/a	5,740	6,237	6,439	6,585	6,737	6,893	7,057	1,317	23%
Other Services	n/a	8,403	9,305	9,379	9,653	9,893	10,137	10,382	1,979	24%
Public	n/a	1,586	1,743	1,752	1,778	1,803	1,835	1,875	289	18%
Self-employed	n/a	4,651	4,686	4,827	4,948	5,052	5,160	5,273	622	13%
Unincorporated Santa Cruz	n/a	42,069	45,264	45,748	46,588	47,366	48,202	49,071	7,002	17%
% change			7.6%	1.1%	1.8%	1.7%	1.8%	1.8%		

Important Note: Independent rounding results in some cases in which parts do not sum to the total.

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Final 2022 Regional Growth Forecast

Watsonville

POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	732,708	762,241	774,729	800,726	824,992	842,189	857,828	869,776	107,535	14%
% change		4.0%	1.6%	3.4%	3.0%	2.1%	1.9%	1.4%		
Watsonville	51,199	52,410	51,515	52,918	54,270	55,138	55,786	56,344	3,934	8%
% change		2.4%	-1.7%	2.7%	2.6%	1.6%	1.2%	1.0%		

HOUSEHOLD POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	700,207	728,352	740,321	763,380	784,511	799,310	811,954	822,824	94,472	13%
% change		4.0%	1.6%	3.1%	2.8%	1.9%	1.6%	1.3%		
Watsonville	50,671	51,882	50,987	52,382	53,718	54,582	55,218	55,772	3,890	7%
% change		2.4%	-1.7%	2.7%	2.6%	1.6%	1.2%	1.0%		

GROUP QUARTERS POPULATION									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	32,501	33,889	34,408	37,346	40,481	42,879	45,874	46,952	13,063	39%
% change		4.3%	1.5%	8.5%	8.4%	5.9%	7.0%	2.3%		
Watsonville	528	528	528	536	552	556	568	572	44	8%
% change		0.0%	0.0%	1.5%	3.0%	0.7%	2.2%	0.7%		

HOUSING									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	260,256	262,660	267,812	277,645	288,386	296,352	301,307	304,900	42,240	16%
% change		0.9%	2.0%	3.7%	3.9%	2.8%	1.7%	1.2%		
Watsonville	14,089	14,131	14,226	14,829	15,629	16,108	16,347	16,519	2,388	17%
% change		0.3%	0.7%	4.2%	5.4%	3.1%	1.5%	1.1%		

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Final 2022 Regional Growth Forecast

Watsonville

HOUSEHOLDS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	236,059	238,862	243,863	253,106	262,493	269,175	273,462	276,730	37,868	16%
% change		1.2%	2.1%	3.8%	3.7%	2.5%	1.6%	1.2%		
Watsonville	13,528	13,627	13,772	14,289	14,971	15,350	15,538	15,686	2,059	15%
% change		0.7%	1.1%	3.8%	4.8%	2.5%	1.2%	1.0%		

VACANCY RATE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	9.3%	9.1%	8.9%	8.8%	9.0%	9.2%	9.2%	9.2%	0.2	2%
Watsonville	4.0%	3.6%	3.2%	3.6%	4.2%	4.7%	4.9%	5.0%	1.5	41%

AVERAGE HOUSEHOLD SIZE									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	2.97	3.05	3.04	3.02	2.99	2.97	2.97	2.97	-0.08	0%
Watsonville	3.75	3.81	3.70	3.67	3.59	3.56	3.55	3.56	-0.25	0%

JOBS									Chg.2015-2045	
	2010	2015	2020	2025	2030	2035	2040	2045	Num.	%
AMBAG Region	351,735	377,335	406,280	410,017	418,132	425,845	434,147	442,824	65,489	17%
% change		7.3%	7.7%	0.9%	2.0%	1.8%	1.9%	2.0%		
Watsonville										
Agriculture (field work)	n/a	3,828	4,192	4,195	4,208	4,223	4,238	4,253	425	11%
Manufacturing	n/a	1,492	1,667	1,673	1,682	1,692	1,702	1,712	220	15%
Site-based Skilled Trade	n/a	4,310	4,850	4,943	5,042	5,105	5,192	5,283	973	23%
Wholesale	n/a	2,638	2,874	2,830	2,865	2,891	2,916	2,941	303	11%
Retail	n/a	3,149	3,063	3,072	3,095	3,130	3,165	3,198	49	2%
Financial & Prof. Serv.	n/a	2,064	2,130	2,145	2,182	2,222	2,262	2,301	237	11%
Education	n/a	1,532	1,687	1,695	1,716	1,736	1,765	1,800	268	17%
Health Care & Social Assist	n/a	3,267	3,547	3,663	3,735	3,809	3,887	3,968	701	21%
Other Services	n/a	2,578	2,855	2,878	2,935	2,975	3,015	3,055	477	19%
Public	n/a	1,011	1,111	1,117	1,128	1,142	1,162	1,187	176	17%
Self-employed	n/a	534	538	554	568	580	592	605	71	13%
Watsonville	n/a	26,403	28,514	28,765	29,156	29,505	29,896	30,303	3,900	15%
% change			8.0%	0.9%	1.4%	1.2%	1.3%	1.4%		

Important Note: Independent rounding results in some cases in which parts do not sum to the total.

Data Sources:

Population and Housing 2010-2019 from California Department of Finance.

Employment 2010 and 2015 from AMBAG based on California Employment Development Dept. and InfoUSA.

All projections from 2022 Regional Growth Forecast, produced by AMBAG and PRB.

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B

Financial Plan

Introduction

Transportation funding has undergone significant transformation from relying on federal and state funds, to increased dependence on local funds over the past 25 years. In general, federal and state formula funding programs had not increased as fast as the inflationary increases in construction, operating, and maintenance costs and the increases in demand for new facilities. However, recently the federal government has made efforts to mediate COVID related revenue declines in transportation funding. Locally the region has utilized various financing options to implement regionally significant projects to maintain a state of good repair and provide new multimodal solutions.

Revenue Sources

State and federal planning regulations require the development of a Revenue Constrained plan. Such a plan is based on current and reasonably available sources and levels of federal, state and local transportation revenue, projected out to the year 2045. Chapter 3, the Financial Element, identifies major Federal, State, regional, and local funding sources anticipated being available during the life of the plan. A full list and description of funding sources is included in this appendix.

Federal Revenues

On December 5, 2015, President Obama signed into law a new five-year transportation authorization bill for FY2016-2020, entitled Fixing America's Surface Transportation Act (FAST Act). The FAST Act built off of efforts made in 2012's Moving Ahead for Progress in the 21st Century (MAP-21). Both the FAST Act and MAP-21 consolidated several funding programs into a few core sources in an effort to create a streamlined, performance-based and multimodal program to address the challenges facing the U.S. transportation system. The FAST Act was extended through September 30, 2021, as part of the Continuing Appropriations Act, 2021, and other Extensions Act. The FAST Act, through legislation, may be extended or replaced with a new transportation reauthorization bill. In September 2021, the Fixing America's Surface Transportation Act (FAST Act) expired. As part of negotiations for a multiyear federal infrastructure plan, Congress adopted a new federal transportation act – the Infrastructure Investment and Jobs Act (IIJA) of 2021 – which is expected to increase funding for transportation. Under IIJA, California is estimated to receive \$25.3 billion for federal-aid highway apportioned programs over five years, \$4.2 billion over five years from a new bridge program; \$384 million over five years from a new program to support the expansion of an electric vehicle (EV) charging network; and \$9.45 billion over five years to improve public transportation options across the state. The IIJA also creates new transportation discretionary grant programs and increases funding for existing discretionary grant programs between FY 2022 and FY 2026. Details on what this means for projects in the AMBAG region will be integrated into future updates once available.

Federal revenue sources for the region totals approximately \$2 billion, roughly 15 percent of the region's total forecast revenue through 2045. The region qualifies for federal revenue from 19 different programs. However, just four of these programs constitute approximately 60 percent of all federal revenue: the Highway Bridge Program, FEMA funding for emergency road repairs, the FAA Airport Improvement Program, and the Surface Transportation Block Grant/Regional Surface Transportation Program. The federal revenue sources are detailed below.

Better Utilizing Investments to Leverage Development (BUILD) / Rebuilding American Infrastructure with Sustainability and Equity (RAISE)

- Total Revenue: \$35M
- Assumption: Based on jurisdiction estimates.

Bus and Bus Facilities Discretionary Program (FTA 5339b)

- Total Revenue: \$81.3M
- Assumption: based on previous years grant awards

Bus and Bus Facilities Formula Program (FTA 5339)

- Total Revenue: \$33M
- Assumption: Population based transit formula program for bus and bus facilities.

Coronavirus Aid, Relief, and Economic Security (CARES) Act 5311

- Total Revenue: \$3.6M
- Assumption: Temporary population based formula fund supplement.

Enhanced Mobility of Seniors & Individuals with Disabilities (FTA 5310)

- Total Revenue: \$15.9M
- Assumption: Population based formula funds.

FAA Airport Improvement Program (AIP)

- Total Revenue: \$272.8M
- Assumption: Average annual FAA grants from previous years.

Federal Rail Program

- Total Revenue: \$10M
- Assumption: Expected FRA apportionment for proposed services.

Federal Lands Access Program (FLAP)

- Total Revenue: \$19.5M
- Assumption: Based on expected Federal grant award.

FEMA/CALEMA/ER - Emergency Road Repair Funding

- Total Revenue: \$297.8M
- Assumption: Average received in recent years for emergency repairs on local roads.

Fixed Guideway Capital Investments Grants (FTA 5309)

- Total Revenue: \$41.8M
- Assumption: Based on current competitive discretionary grant applications or average awards over previous 4-year period.

Highway Bridge Program (HBP)

- Total Revenue: \$365.1M
- Assumption: Average of 10 years, per programmed projects in MTIP.

Highway Safety Improvement Program (HSIP)

- Total Revenue: \$96.2M
- Assumption: HSIP apportionment forecasted from FHWA and factoring the annual average of the HSIP funds received during previous years period.

Metropolitan Planning (FTA 5303)

- Total Revenue: \$0.27M
- Assumption: Population based formula funds.

Rural Area Formula Grants (FTA 5311)

- Total Revenue: \$50.2M
- Assumption: Population based transit formula funds for non-urbanized areas.

Surface Transportation Block Grant

- Total Revenue: \$262M
- Assumption: STBG apportionment forecast summary.

Statewide Planning (FTA 5304)

- Total Revenue: \$4.7M
- Assumption: State-based planning funds awarded to the region based on population.

Small Transit Intensive Cities (FTA 5307c)

- Total Revenue: \$71.2M
- Assumption: Formula funds set aside for operations or transit capital based on performance metrics.

State of Good Repair Grants (FTA 5337)

- Total Revenue: \$56.3M
- Assumption: Based on previous year grant awards.

Urbanized Area Formula Program (FTA 5307)

- Total Revenue: \$284.9
- Assumption: Population based transit formula funds for urbanized areas.

State Revenues

State revenue sources for the region totals approximately \$4.5 billion, roughly 40 percent of the region's total forecast revenue through 2045. The region qualifies for state revenue from 17 different programs. However, just one of these programs constitute approximately 67 percent of all state revenue: SHOPP funding. The state revenue sources are detailed below.

Active Transportation Program

- Total Revenue: \$249.4M
- Assumption: Based on estimated awards and historical averages.

Affordable Housing & Sustainable Communities

- Total Revenue: \$30.1M
- Assumption: Projected grant award for projects over the life of the Plan.

Airport Improvement Program Match

- Total Revenue: \$1.3M
- Assumption: Average annual of past eight years for each county.

California Aid to Airports Program

- Total Revenue: \$1.3M
- Assumption: Based on previous years apportionment.

California Public Utilities Commission (CPUC) Access for All Program

- Total Revenue: \$3.0M
- Assumption: Expected grant awards.

Freeway Service Patrol

- Total Revenue: \$12M
- Assumption: Based on previous years average funding.

Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP)

- Total Revenue: \$15.0M
- Assumption: Expected grant awards.

Low Carbon Transit Operations Program (LCTOP)

- Total Revenue: \$27.9M
- Assumption: Expected grant awards based on previous years averages.

SAFE

- Total Revenue: \$17.2M
- Assumption: Average annual historical funding.

Senate Bill 1 (SB1) Competitive Programs

- Total Revenue: \$372M

Assumption: Expected grant awards from SB1 Trade Corridor Enhancement Program (TCEP), Solutions for Congestion Corridors Program (SCCP), and SB1 LPP Competitive funds.

Senate Bill 1 (SB1) Local Partnership Program (LPP)

- Total Revenue: \$41.5M
- Assumption: Based on expected formula allocation from SB1 LPP funds.

Senate Bill 1 (SB1) State Transit Assistance (STA) State of Good Repair (SOGR)

- Total Revenue: \$42.9M
- Assumption: Based on expected grant awards.

State Highways Operation and Protection Program (SHOPP)

- Total Revenue: \$3,050.9M
- Assumption: Projected apportionment from CTC includes Road Maintenance Rehabilitation Account (RMRA) SB1 SHOPP funds.

State Transportation Improvement Program (STIP)

- Total Revenue: \$304.8M
- Assumption: Average of 5-year apportionment from CTC.

State Transit Assistance

- Total Revenue: \$236.7M
- Assumption: Apportionment from CTC for STA and STA State of Good Repair funding.

Transit and Intercity Rail Capital Program (TIRCP)

- Total Revenue: \$143.3M
- Assumption: Expected grant awards.

SB 743 VMT Fee

- Total Revenue: \$1.9M
- Assumption: Based on jurisdiction estimates.

Regional Revenues

The regional revenue sources are detailed below.

AB 2766

- Total Revenue: \$30.4M
- Assumption: Expected grant awards.

Local Revenues

At over \$6.9 billion, local revenues constitute approximately 51 percent of all transportation funding for the Monterey Bay Area in the MTP/SCS. Recently local transportation sales tax measures have generated significant funding for local transportation systems through TAMC's Measure X (2016), SCCRTC's Measure D (2016), and SBtCOG's Measure G (2018). These funding measures constitute approximately 22 percent of all local transportation revenues. The local revenue sources are detailed below.

City Transportation Sales Taxes

- Total Revenue: \$104.8M
- Assumption: Based on average designated for transportation projects in annual city budgets.

City/County General Fund

- Total Revenue: \$689.4M
- Assumption: Based on local jurisdictions calculations.

Developer Fees

- Total Revenue: \$120.3M
- Assumption: Based on local jurisdictions calculations.

Gas Tax/Gas Tax Replacement

- Total Revenue: \$1,405M
- Assumption: Projected apportionment from CTC which includes major increases from SB 1.

Lease Revenues

- Total Revenue: \$6.9M
- Assumption: Based on historical averages.

Local Airport Revenues

- Total Revenue: \$125.5M
- Assumption: Based on local jurisdictions budgets.

Local Transportation Fund (LTF)/Transportation Development Act (TDA)

- Total Revenue: \$675.4M
- Assumption: Historical annual average and estimates. Formerly known as TDA.

Local Transportation Sales Tax

- Total Revenue: \$1,507.1M
- Assumption: Based on projection of funds generated by Measure D (Santa Cruz County), Measure X (Monterey County), and a sales tax in San Benito County beginning in 2020.

Miscellaneous Local Revenues

- Total Revenue: \$642.9M
- Assumption: Various.

Tolls

- Total Revenue: \$146.3M
- Assumption: Based on estimated future toll revenues from local/regional studies. Tolling revenues for the SR 156 Corridor Improvement Project are included as a reasonably available revenue source for Monterey County, estimated to begin in the year 2030. TAMC has been working closely with Caltrans to outline the tasks, activities, and agreements necessary to consider tolling via a public-private partnership or public tolling authority as an option to fund construction of the SR 156 Corridor Improvement Project. In 2017, TAMC completed a Tolling Traffic and Revenue Study for SR 156. The SR 156 Multimodal Corridor Plan was completed in June 2020. TAMC continues to work on additional tolling activities for the project. For more information, please see TAMC's 2022 Regional Transportation Plan.

Transit Fares and Non-Fare Revenue

- Total Revenue: \$698.3M
- Assumption: Based on past and projected farebox recovery data from the transit operators.

Transit Sales Tax

- Total Revenue: \$835.1M
- Assumption: Based on estimated sales tax revenues.



C Project Lists

Introduction

This appendix lists the regionally significant revenue constrained projects (Tables C-1 through C-3) included in the 2045 MTP/SCS. Tables are organized by county and project type with corresponding total costs that are included in the revenue constrained network. Unconstrained projects are shown in Tables C-4 through C-6. Please refer to the Regional Transportation Planning Agency’s county level Regional Transportation Plans for more detailed information on project phasing. ¹

1 2022 Monterey Regional Transportation Plan, Appendix D
 2020-2045 San Benito Regional Transportation Plan, Appendix A
 2045 Regional Transportation Plan for Santa Cruz County, Chapter 6

Table C-1a: Monterey County Active Transportation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-CAR002-CM	Carmel to Pebble Beach Bike/Ped Facility	Construct Class I or Class II bike facility.	\$86
MON-CAR021-CM	SR 1 Carmel Corridor between Carmel River Bridge and Carpenter Street	Provide accomodation for bicyclists along State Route 1 Bike Route.	\$500
MON-CAR024-CM	Rio Road Traffic Calming, Pedestrian Access and Bicycle Lanes	Install traffic calming devices, enhance visibility and safety at the crossing zone, and provide bicycle lanes	\$250
MON-CAR025-CM	Eighth and San Antonio Avenues Class II Bike Improvements	Install signs, pavement markings, intersection modifications, etc. along Eighth and San Antonio Avenues	\$80
MON-CAR027-CM	Pedestrian Pathway behind Larson Field and Rio Park	Construct pedestrian and possible bike route around Larson Field across Rio Park site	\$75
MON-CAR035-CM	Downtown ADA Ramps	Install new and reconstruct non-conforming ADA ramps in Downtown Area (Est. 125 total)	\$1,000
MON-CAR038-CM	Downtown Sidewalk Repairs and Pedestrian Enhancements	Repair damaged sidewalks, add pedestrian enhancements, benches, signs, trash receptacles, etc.	\$250
MON-DRO006-DR	Gen. Jim Moore Bicycle Improvement	Stripe Class II both sides w/in City limits.	\$10
MON-DRO007-DR	Canyon Del Rey Boulevard (Hwy 218) Bicycle Gap	Stripe Class II Bike lanes on East side of Canyon Del Rey Blvd and complete gaps on Westside; Stripe/Restripe bike lanes to the left of right turn lanes	\$500
MON-GRN001-GR	Apple Avenue Bridge over US 101	Construct new bike/pedestrian bridge parallel to existing overpass.	\$3,548
MON-GRN005-GR	Thorne Road Bridge over US 101	Construct new bike/pedestrian bridge parallel to existing overpass.	\$1,548
MON-GRN010-GR	12th Street Bike Lanes	Construct Class II bike lanes.	\$1
MON-GRN011-GR	13th Street Bike Lanes	Construct Class II bike lanes.	\$1
MON-GRN012-GR	2nd Avenue Bike Lanes	Construct Class II bike lanes.	\$1
MON-GRN013-GR	3rd Street Bike Lanes	Construct Class II bike lanes	\$1
MON-GRN014-GR	7th Street Bike Lanes	Construct Class III bike lanes.	\$1
MON-GRN015-GR	El Camino Real Exit Bike Lane	Construct Class II/III bike lane (Class II preferred).	\$1
MON-GRN016-GR	Elm Avenue Bike Lanes	Construct Class II bike lanes.	\$1
MON-GRN017-GR	Pine Avenue Bike Lanes	Construct Class II bike lanes	\$1
MON-GRN018-GR	Walnut Avenue Bike Lanes	Construct Class II bike lane.	\$1
MON-KCY008-CK	Airport Road Bike Lane	Sign Class III bike lane.	\$2
MON-KCY009-CK	Metz Road Bike Lane	Stripe Class II, restripe roadway	\$200
MON-KCY037-CK	Maintenance/Repairs	Repair/rebuild, streets sidewalks (financial info estimated)	\$120
MON-KCY038-CK	Vanderhurst Bike Lanes	Install class II bike lanes.	\$20
MON-KCY039-CK	1st St Bike Lanes	Install class II bike lanes	\$20
MON-KCY040-CK	Broadway Bike Lanes	Install class II bike lanes	\$5

Table C-1a: Monterey County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-KCY045-CK	Division St Bike Lanes	Install class II bike lanes	\$50
MON-KCY046-CK	San Antonio Dr Bike Lanes	Install class II bike lanes: Includes pedestrian improvements (road diet)	\$50
MON-KCY047-CK	N. Third St Bike Lanes	Install class II bike lanes	\$50
MON-KCY048-CK	Fransiscan Way Bike Lanes	Install class II bike lanes	\$50
MON-MAR026-MA	Citywide Sidewalk Improvement Program	Construct new sidewalk per ADA Transition Plan	\$6,000
MON-MAR039-MA	Downtown Pedestrian Improvements	Sidewalk and crosswalk improvements downtown; Project part of the Downtown Vitalization Plan	\$1,000
MON-MAR108-MA	Remove and Replace Signs, Class III Bikeway	Remove and replace signs at signalized trail intersections, replace with R9-5 signs	\$30
MON-MAR157-MA	Reservation Rd/Beach Rd Improvements	Widen roadway w/ sidewalk and bike lane improvements	\$6,800
MON-MAR160-MA	ADA Transition Program	City-wide sidewalk, ramp, intersection, and bus-stop improvements	\$1,621
MON-MRY001-MY	Aguajito Road	Construct new Class I Bikeway	\$800
MON-MRY002-MY	Del Monte - Washington Improvements	Traffic signal improvements that include bike/ped safety features	\$3,000
MON-MRY003-MY	Del Monte/Aguajito and Del Monte/El Estero Signal Improvements	Ped and bike improvements at Del Monte and Camino Aguajito and Camino El Estero to include signal work	\$3,400
MON-MRY012-MY	Pacific Street Bike/Ped Improvements	Bike/ped and traffic flow improvements	\$1,500
MON-MRY013-MY	Recreation Trail Improvements	Widening and rehabilitation of recreation trail to include access to Rec Trail and trail crossings	\$8,000
MON-MRY014-MY	Window on the Bay	New bikeway and pedestrian facilities	\$7,000
MON-MRY016-MY	Lower Presidio Pedestrian Connection	New pedestrian connector	\$2,500
MON-MRY020-MY	Monterey City Bikeways Program	Install Class I, Class II, Class III and Class IV bikeways throughout city	\$14,177
MON-MRY035-MY	Citywide intersection ADA upgrades	Install ADA curb ramps and ADA access improvements	\$3,500
MON-MRY037-MY	Citywide Wayfinding Sign Program	Provide a comprehensive vehicular, pedestrian and bicycle wayfinding sign program	\$100
MON-MRY038-MY	Traffic System, Pedestrian and Bike Upgrades Citywide	Traffic signal upgrades to include bike and pedestrian improvements, includes detection and APS, operations and safety improvements	\$431
MON-MRY040-MY	Del Monte and Casa Verde/Rec Trail Improvements	Add pedestrian and bike safety improvements and protected lefts at Del Monte/Casa Verde/Rec Trail	\$923
MON-MRY041-MY	N Fremont Class I/Class IV Gap Closure	Add Class 1 and/or Class IV connection to N Fremont project to FORTAG	\$300
MON-MRY048-MY	Citywide Sidewalk Repair	Sidewalk panel repair	\$2,000
MON-MYC003-UM	Blackie Road	Install Class II bikeway	\$5,400
MON-MYC026-UM	Elkhorn Road	Install class II bikeway	\$10,900
MON-MYC040-MA	Inter-Garrison Road	Install Class II bikeway	\$10,800

Table C-1a: Monterey County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MYC046-UM	Laureles Grade Road	Install Class II bikeway	\$6,497
MON-MYC053-UM	Metz Road	Install Class III bikeway	\$24
MON-MYC062-UM	Old Stage Road Shoulder Widening	Shoulder widening and channelization at intersections	\$11,500
MON-MYC068-UM	Porter Drive	Install Class III bikeway	\$30
MON-MYC075-UM	River Road Operational Improvements	Widen shoulders and improve geometrics, and install class II bike lanes	\$29,300
MON-MYC085-UM	San Juan Grade Road	Install Class II bikeway	\$6,120
MON-MYC115-UM	Corral de Tierra	Install Class II bikeway	\$8,508
MON-MYC118-UM	Williams Rd.	Install Class III bikeway	\$2
MON-MYC124-UM	Harris Road Improvements	Lt Channelization, shoulder improvements	\$8,000
MON-MYC135-UM	Bluff Rd	Install class III bikeway	\$5
MON-MYC138-UM	Camphora Gloria Road	Install Class II bikeway	\$5,850
MON-MYC145-UM	Castro St	Install class III bikeway	\$1
MON-MYC146-UM	Castroville Boulevard	Install Class II bikeway	\$3,602
MON-MYC149-UM	Central Ave	Install class III bikeway	\$22
MON-MYC150-UM	Chualar River Rd	Install class III bikeway	\$8
MON-MYC151-UM	Cooper - Nashua Rd	Install class III bikeway	\$15
MON-MYC152-UM	Cooper Road	Install Class III bikeway	\$9
MON-MYC168-UM	Davis Road	Install Class II bikeway	\$3,193
MON-MYC172-UM	Elkhorn Rd	Install class II bikeway	\$194
MON-MYC185-UM	Geil St	Install class III bikeway	\$1
MON-MYC186-DR	Gen Jim Moore Path	Install class I bikeway	\$1,206
MON-MYC193-UM	Harrison Rd	Install class II bikeway	\$82
MON-MYC231-UM	Reservation Rd Pedestrian/Bicycle Access	Install class I bikeway and improve visibility of pedestrian crossing at Blanco Road.	\$140
MON-MYC240-UM	San Benancio Road	Install Class II bikeway	\$10,364
MON-MYC246-UM	San Juan Road to Pajaro Levee	Install Class II bikeway	\$663
MON-MYC248-UM	Sanctuary Scenic Trail 15A	Install class I bikeway	\$5,082
MON-MYC251-UM	Sanctuary Scenic Trail Segment 12	Install class I bikeway	\$5,552
MON-MYC252-UM	Sanctuary Scenic Trail Segment 13	Install class I bikeway	\$7,404
MON-MYC258-UM	Sanctuary Scenic Trail Segment 7	Install class I bikeway	\$3,411
MON-MYC291-UM	Reservation Road Bicycle Lanes	Install Class II bicycle lanes	\$250
MON-MYC296-UM	Castroville Boulevard at Elkhorn Rd - Pedestrian Beacon Project (RMA-PW&F)	Install rectangular rapid-flashing beacons and streetlights; Rio Rd at Via Nona Marie-install rectangular rapid-flashing beacons. (RMA-PW&F)	\$210
MON-MYC317-UM	Laurel Drive Sidewalk Improvement (County element)	Related to Salinas Laurel Drive Improvement project; Small amount of County property fronting Laurel Drive. (RMA-PW&F)	\$204
MON-MYC327-UM	Castroville Sidewalks	Construction of sidewalks, markings and ADA ramps	\$4,000

Table C-1a: Monterey County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MYC328-UM	South County Communities Sidewalks	Construction of sidewalks, markings and ADA ramps	\$7,700
MON-PGV008-PG	Rec. Trail Improvements	Add landscaping, hardscape, stairs, benches, handrails, crosswalks, and signs	\$2,000
MON-PGV011-PG	Recreational Trail Repairs	Repair failing sections of recreational trail	\$3,000
MON-PGV026-PG	David Ave Bikeway	Install class II/III bikeway and wayfinding signage along David Ave.	\$400
MON-SCY009-SA	Bike Path Lighting	Install Lighting on existing Class I path.	\$325
MON-SCY010-SA	Class I Bike Path	Complete connection of Monterey Bay Coastal Trail Class I bike path through Sand City	\$400
MON-SCY011-SA	Class I bike path along Railroad	Install Class I bike path along Railroad ROW	\$1,300
MON-SCY012-SA	Class III Bikeways	Install Class III bikeway signage	\$15
MON-SEA029-SE	Lightfighter Drive Pedestrian Improvements	Sidewalk improvements and landscaping upgrades	\$500
MON-SEA033-SE	Bike Upgrades - City-Wide	Install class II bike lanes city wide. (See ATP)	\$2,000
MON-SEA036-SE	Fremont Bike Lanes	Install Class II Bike Lanes on Fremont	\$2,750
MON-SEA037-SE	ADA Transition Plan Upgrades	Roadway & Sidewalk improvements	\$32,000
MON-SNS003-SL	ADA Access Ramp Installations	Install ADA access ramp locations throughout city, annual project	\$16,000
MON-SNS005-SL	Alisal Rd. Bikeway	Install shared bike path East Alisal to City Limits	\$6
MON-SNS007-SL	Alvin Drive Bike Lanes	Install bike lanes along Alvin between McKinnon and Natividad	\$172
MON-SNS014-SL	Bridge Street Bike Lanes	Install bike lanes along entire length of Bridge Street	\$419
MON-SNS019-SL	Davis Road Bike Path	Install .57 mile bike path	\$350
MON-SNS046-SL	Reclamation Ditch Bike System	Construct Class 1 Bike Path along ditch # 1665	\$3,500
MON-SNS064-SL	Calle Del Adobe / West Laurel Dr Bike Lanes	Install Class II bike lanes	\$156
MON-SNS065-SL	Carr Lake Bikeways	Construct Class I and Class II Bikeways	\$5,000
MON-SNS066-SL	East Alisal St (Future St) and Freedom Parkway (Future St) Bike Lanes	Install Class II bike lanes	\$200
MON-SNS071-SL	John Street Class III Bikeway	Install Class III bikeway signage	\$5
MON-SNS072-SL	Los Palos Drive Class III Bike Lane	Install Class III bikeway signage	\$1
MON-SNS073-SL	Market Street Class II Bikeway	Install Class II bikeway signage	\$1
MON-SNS075-SL	N Maderia / King St Class III Bikeway	Install Class III bikeway signage	\$1
MON-SNS076-SL	N Maderia / Saint Edwards Ave Class III Bikeway	Install Class III bikeway signage	\$5

Table C-1a: Monterey County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-SNS077-SL	N Main / Espinosa Rd Class II Bike Lane	Install Class II bike lane	\$5,000
MON-SNS078-SL	Natividad Creek Bike Path	Install new bike path	\$680
MON-SNS080-SL	Rossi St Extension Class II Bike Lanes	Install Class II bike lanes	\$175
MON-SNS083-SL	Russell Rd Class II Bike Lanes	Install Class II bike lanes	\$155
MON-SNS084-SL	San Juan Grade Class II Bike Lanes	Install Class II bike lanes	\$230
MON-SNS086-SL	Station Place (ITC Bridge)	Install bike and ped bridge over railroad	\$1,500
MON-SNS087-SL	Trevin Ave Class II Bike Lanes	Install Class II bike lanes	\$25
MON-SNS089-SL	W Laurel / US 101 Overpass / Adams St Class III Bikeway	Install Class III bikeway signage	\$3
MON-SNS129-SL	Street Sidewalk Repair	Annual Sidewalk Repairs (project on-going)	\$1,050
MON-SNS131-SL	Downtown Vibrancy Plan	Circulation/Parking/Pedestrian Improvements in Downtown	\$375
MON-SNS137-SL	East Alisal Street Vibrancy Plan	Circulation/Parking/Pedestrian Improvements on East Alisal Street	\$2,500
MON-SNS138-SL	Bardin Road Safe Routes to School/ATP	Circulation, SR2S, two roundabouts, road reconstruction on Bardin Rd, Slurry seal on East Alisal Street and crosswalk and ADA enhancements	\$12,000
MON-SNS139-SL	Alvin Drive	Circulation, SR2S, Traffic Signals, Cycle Tracks	\$3,548
MON-SNS140-SL	Linwood Drive	SR2S, Bike Lanes	\$700
MON-SNS141-SL	East Laurel Drive Pedestrian Improvements	Sidewalk. Lighting, trail lighting and pedestrian push button upgrades on Const/Laurel traffic signal	\$5,800
MON-SNS145-SL	W Alisal Complete Streets	Circulation, Bike Lanes, Ped, Transit	\$8,552
MON-SNS146-SL	Lincoln Ave Complete Streets	Circulation, Bike Lanes, Bus Facilities	\$1,570
MON-SNS161-SL	Natividad/Gabilan Creek Trail	Bike/Ped Trail Repairs	\$1,100
MON-SNS164-SL	Rossi-Rico Bike Trail	Bike Trail repairs along Rossi Rico Park	\$400
MON-SOL006-SO	Bicycle Racks and Lockers	Install Bicycle Racks and Lockers	\$35
MON-SOL043-SO	Pedestrian Lighting	Construct pedestrian lighting along various City streets	\$900
MON-SOL044-SO	Pinnacles Bike Route	Construct a class I bike path/class II bike lanes along Metz Rd to encourage bicycle tourism.	\$500
MON-SOL075-SO	Citywide Bike Lanes	Bike Lanes (2007 TIF M2, 2013 TIF M2); construct bike lanes citywide	\$1,440
MON-TAMC006-TAMC	Monterey County Bicycle and Pedestrian Improvement Projects	Various bicycle and pedestrian improvement projects throughout Monterey County	\$12,741

Table C-1a: Monterey County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-TAMC010-TAMC	Fort Ord Regional Trail and Greenway (FORTAG)	Approximately 28 mile bike and pedestrian access path through the former Fort Ord. Construction anticipated to take place in phases with Phase 1 as 218 Canyon Del Rey segment (TAMC projects 16, 17 and 18 are segments of this overall project)	\$80,000
MON-TAMC011-TAMC	Safe Routes to Schools	Countywide Safe Routes to Schools program	\$20,000
MON-TAMC016-TAMC	FORTAG Phase 1 - 218 Canyon Del Rey Segment	Construction of the 218 Canyon Del Rey segment of the FORTAG project	\$10,396
MON-TAMC017-TAMC	FORTAG Phase 1B - Del Monte to Fremont	Construction of Del Monte to Fremont Segment	\$8,197
MON-TAMC018-TAMCC	FORTAG Phase 2 - CSUMB Segment	Construction of the CSUMB Segment	\$10,070

Table C-1b: Monterey County Highway Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-CT011-CT	Scenic Route 68 Corridor Improvements	Make intersection and other operational improvements to increase safety and improve traffic flow from Salinas to Monterey.	\$94,143
MON-CT022-CT	SR 156 - Expressway Conversion	Expressway to freeway conversion; Construct new 4 lane highway south of existing alignment, convert existing highway to frontage road (Related to CT023 and CT036)	\$106,225
MON-CT023-CT	State Route 156 and US 101 Interchange	Construct new interchange for SR156 and US101 (related to CT022 and CT036)	\$250,890
MON-CT030-SL	US 101 - Salinas Corridor	Widen US 101 to 6 lanes and/or auxiliary lanes within city limits of City of Salinas where feasible.	\$52,000
MON-CT031-CT	US 101 - South of Salinas Improvements	Purpose of this project is to improve safety and relieve future traffic congestion by eliminating multiple highway crossings, constructing a new interchange at Harris Road, and provide necessary frontage roads to allow farmers to access their lands. Frontage roads along US 101 south of Salinas (Abbott Street on/off ramp) and make related intersection improvements (EA 05-OH330). These improvements will enhance bicycle and pedestrian mobility and facilitate transit access.	\$112,000
MON-CT036-CT	SR 156 - Castroville Boulevard Interchange	Construction new interchange for SR 156 and Castroville Boulevard/Blackie Road. (related to CT022 and CT023)	\$55,200
MON-GON015-GO	US 101 / Gloria Road Interchange	US 101/Gloria Road Interchange Improvements.(EA 05-OP930) PM 68.4/70.4	\$36,000
MON-GRN008-GR	US 101 - Walnut Avenue Interchange	Relocate and replace existing US 101/Walnut Avenue Interchange and widen to six lanes. (EA 05-OP160) PM 53.4/54.3	\$39,800
MON-KCY006-CK	US 101 - 1st Street Interchange (Lonoak Street I/C)	Extend San Antonio over railroad tracks from Lonoak to US 101/First Street Interchange. (PM R39.77).	\$32,580
MON-MAR136-MA	SR1 & Imjin Bridge	Widen NB off-ramp to two lanes	\$590
MON-MAR137-MA	SR1 & Imjin Bridge	Widen SB on-ramp to two lanes	\$500
MON-SOL002-SO	US 101 - North Interchange	Install new interchange north of US 101 and Front Street.	\$5,200
MON-SOL003-SO	US 101 - South Interchange	Install new interchange south of US 101 and Front Street.	\$21,760
MON-SOL014-SO	SR 146 Bypass (Pinnacles Parkway)	Construct to 4 lanes from SR 146 (Metz Road) to Nestles Road. Install Class II bike facility.	\$15,589

Table C-1c: Monterey County Highway Operations, Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-CT039-CT	SR 218 - Operational Improvements	Add turn pockets, signal improvements, shoulder widening, etc.	\$10,000
MON-CT040-CT	State Highway Operations and Protection Program (SHOPP)	Unspecified SHOPP projects/3 Categories	\$830,591
MON-MAR134-MA	SR1 & Imjin Bridge	Restripe bridge for two WB lanes and one EB lane	\$26
MON-MAR135-MA	SR1 & Imjin Bridge	Convert SB off-ramp to off-ramp loop	\$2,000
MON-MYC288-UM	SR 1 - Carmel River FREE	Replace a portion of the elevated SR 1 roadway embankment with a causeway. Realign and re-profile the existing Highway between the southern end of the existing Carmel River bridge to the south of the proposed overflow bridge. Construct new bicycle and pedestrian access. Construct new southbound turn lane to serve the Palo Corno Regional Park entrance.	\$14,900
MON-PGV010-PG	SR 68 - Bishop to Sunset	Mobility Improvements including sidewalks, lighting, landscaping, and roadways overlay	\$10,502
MON-SNS123-SL	US 101 / Boronda Improvements	Auxillary Lanes/Ramp Improvements	\$960
MON-SNS126-SL	US 101 / Kern Street TS	Traffic Signal or Roundabout at US 101/Kern	\$500
MON-SOL046-SO	Intersection Improvements at Metz Rd and East St	Construct intersection, install roundabout	\$900
MON-TAMC008-TAMC	Holman Highway 68 Safety & Traffic Flow	Make safety and operational improvements to Holman Highway in Pacific Grove and Monterey; includes bicycle, pedestrian and traffic safety and ADA improvements.	\$22,300

Table C-1d: Monterey County Local Streets and Road Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-KCY016-CK	Bypass (South San Antonio Extension)	Bridge, Road and Ped/Bike Construction.	\$10,000
MON-KCY017-CK	Bypass (Lonoak Connection)	Road and Ped/Bike Construction.	\$15,000
MON-MAR077-MA	Salinas Ave. Improvement Project	Construct new 2 lane arterial. Complete Streets design with the widening. Previous FORA project.	\$1,915
MON-MAR114-MA	Del Monte Boulevard Widening	Widen to 4 lanes and add Class II bike lanes. Triggered by Marina Station Subdivision	\$5,000
MON-MAR150-MA	Del Monte Blvd Extension	Construct new roadway	\$13,000
MON-MAR153-MA	Patton (Abrams) Pkwy Extension	Construct new roadway	\$1,150
MON-MAR154-MA	Imjin Pkwy Widening Project	Measure X and SB1 LPP project to widen Imjin Pkwy to 4 lanes from Reservation Rd to Imjin Rd.	\$41,750
MON-MAR165-MA	Imjin Road Widening Project	Widen from 2 lanes to 4 lanes	\$2,075
MON-MRY005-MY	Del Monte Corridor	Add eastbound lane from El Estero to Sloat Ave.	\$8,000
MON-MYC147-UM	SR 156 - Blackie Road Extension	Construct new road from Castroville Blvd to Blackie Rd.	\$18,000
MON-MYC192-UM	Harris Road Widening	Widen to four lanes on Harris Court to Salinas City Limit.	\$13,300
MON-MYC245-UM	San Juan Road Improvements	Widen to four travel lanes with Class II bike lanes from Pajaro to US 101. Construct traffic signals and intersection improvements at the Aromas Road, Carpenteria Road, Murphy Road and Tarpey Road intersections. Construct intersection improvements at San Miguel Canyon Road.	\$71,900
MON-MYC307-UM	Davis Road Bridge Replacement and Road Widening	Replace an existing two-lane, low-level bridge with an high-level four-lane bridge. Widen Davis Road to four lanes from Blanco and Reservation Roads. (RMA-PW&F)	\$71,742
MON-SCY015-SA	Tioga Widening	Widen Tioga Ave. at Del Monte; Install class II bike lanes and fill sidewalk gaps.	\$600
MON-SNS006-SL	US 101 - Alvin Drive Overpass/Underpass and Bypass	Construct overpass/underpass and 4 lane street structure.	\$12,325
MON-SNS008-SL	Bernal Drive East Improvements	Widen road, construct sidewalk and retaining wall on north side of road, between N. Main and Roasarita Dr.	\$1,647
MON-SNS012-SL	Boronda Road Traffic Congestion Relief	Widen to 4 lanes; install class II bike lanes and fill sidewalk gaps. Roundabouts will be installed throughout the corridor	\$6,671
MON-SNS029-SL	John Street - US 101	Widen to 4 lanes between Work to Wood Streets with grade separated overpass	\$8,513
MON-SNS035-SL	Lincoln Avenue Widening	Widen Lincoln to 4 lanes between West Market and Gavilan	\$1,117
MON-SNS037-SL	Main Street (North) Widening	Widen to 6 lanes from Market to Casentini including bicycle and pedestrian improvements.	\$5,060
MON-SNS044-SL	Natividad Road Widening	Widen from 2 to 4 lanes	\$4,296

**Table C-1d: Monterey County Local Streets and Road Improvement Projects
(Continued)**

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-SNS048-SL	Romie Lane Widening	Widen from 2 lanes to 4 lanes between S. Main to East of California Street	\$1,218
MON-SNS050-SL	Russell Rd Widening	Widen Street from US 101 to San Juan Grade Rd.	\$3,078
MON-SNS052-SL	Sanborn Road Widening/Reconstruction	Widen to 6 lanes and reconstruct from John Street to Abbott Streets; accommodations for bikes and peds.	\$14,737
MON-SNS059-SL	Williams Road Widening	Widen from 2 to 4 lanes	\$5,500
MON-SNS090-SL	Russell Road Extension	Extend 4 lane arterial	\$17,557
MON-SNS092-SL	San Juan - Natividad Collector	Construct an east - west 2 lane collector roadway	\$3,635
MON-SNS093-SL	Independence Boulevard Extension	Extend as 2 lane collector	\$1,374
MON-SNS094-SL	Hemingway Drive Extension	Construct 4 lane road	\$2,871
MON-SNS095-SL	Constitution Boulevard Extension	Construct 4 lane street	\$9,556
MON-SNS096-SL	Sanborn Road Extension	Construct 4 lane arterial	\$6,895
MON-SNS097-SL	Williams Russell Collector	Construct new north - south connection	\$8,115
MON-SNS098-SL	Alisal Street Extension	Extend as 2 lane collector street with bike lanes	\$5,119
MON-SNS099-SL	Moffett Street Extension	Extend as 4 lane collector	\$3,336
MON-SNS100-SL	Rossi Street Widening	Widen to 4 Lanes, install median and bike lanes	\$300
MON-SNS101-SL	Bernal Drive Extension	Extend as 4 lane arterial	\$6,976
MON-SNS102-SL	Constitution Boulevard Extension	Construct new 2 lane street	\$3,403
MON-SNS103-SL	Williams Road Widening	Widen from 3 to 4 lanes	\$2,975
MON-SNS104-SL	Alisal Street Widening	Widen from two to four lane arterial between Williams Rd and Alisal Rd.	\$2,908
MON-SNS108-SL	Laurel Drive Widening	Widen to 6 lanes and add left turn channelization west of Constitution	\$2,161
MON-SNS121-SL	McKinnon Street Extension	Extend as a two lane collector from Boronda Rd to Rogge Road	\$3,710
MON-SNS279-SL	Ross Rd Extensions	Extend Rossi St as 4-lane arterial btwn Western Bypass and Davis Rd with bike lanes.	\$2,488
MON-SNS280-SL	Eastern Bypass	Construct four-lane arterial from US 101 to Williams Rd	\$17,837
MON-SNS281-SL	El Dorado Drive Extension	Extend as two lane collector from Boronda Rd to Roggee Rd	\$2,398
MON-SNS282-SL	Abbott Street Widening	Widen to 4-lanes, add median and left turn channelization & eliminate parking on both sides of street	\$1,266
MON-SOL065-SO	Camphora-Gloria Road (2007 TIF R12)	Camphora-Gloria Road (2007 TIF R12); Construct to 4 lanes	\$18,617

Table C-1e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-CAR005-CM	Rio Road Parking Facility	Construct Rio Road off site parking facility with jitney pick up station.	\$20
MON-CAR007-CM	San Carlos Streetscaping	Install streetscape in 2 or 3 small median islands	\$30
MON-CAR009-CM	San Carlos Rehabilitation	Remove concrete pavement, replace drainage facilities, repair or reconstruct concrete sidewalks, curbs, and gutters, and repave with asphalt along San Carlos Street between Ocean and Sixth Avenues	\$200
MON-CAR010-CM	Mission Street Rehabilitation	Rehabilitate Mission Street including repaving street and curb, gutter and sidewalk improvements.	\$400
MON-CAR012-CM	Road rehabilitation and maintenance	Routine maintenance under the Pavement Management Report	\$1,840
MON-CAR026-CM	Mountain View Avenue Intersection Safety Enhancements	Realign side streets and intersections with Mountain View to reduce potential conflicts at offset skew intersections	\$200
MON-CAR028-CM	Second Avenue Embankment Reconstruction	Reconstruct Second Ave Embankment to eliminate landslide potential and reopen road to traffic	\$750
MON-CAR029-CM	Mission Street Bypass Drainage Improvements	Install bypass pipe along Junipero Street to increase capacity due to bottleneck on Mission St	\$820
MON-CAR031-CM	Junipero Drainage Improvements	Increase drainage capacity to eliminate bottleneck	\$800
MON-CAR032-CM	Monte Verde Street and Second Ave Drainage Improvements	Install new underground drainage system to eliminate surface flow damage	\$830
MON-CAR036-CM	Junipero and Ocean Roundabout	Construct new roundabout at the 5-legged Junipero/Ocean Intersection	\$2,500
MON-DRO002-DR	Carlton Drive Resurfacing	Resurface Carlton Drive	\$99
MON-DRO003-DR	Work Avenue Resurfacing	Resurface street	\$55
MON-GON001-GO	5th Street - Fanoie Road	Install two lane roundabout	\$2,500
MON-GON014-GO	US 101/5th Street Interchange	Install roundabouts at on and off ramps	\$6,000
MON-GRN002-GR	El Camino Real	Construct new roundabout to replace signals and increase capacity of the El Camino Real / Walnut Avenue Intersection (Intersection Improvements to Roundabout)	\$2,300
MON-GRN003B-GR	Oak Road Bridge over US 101	Remove and replace existing Oak Avenue bridge.	\$30,000
MON-GRN003-GR	Oak Road Bridge over US 101	Widen bridge for dual left turn lanes.	\$6,000
MON-GRN006-GR	Thorne Road Roadway Realignment at US 101	Realign Thorn Road and add traffic signal.	\$7,300
MON-GRN007B-GR	Traffic Signal Installations	Install traffic signals.	\$450
MON-GRN019-GR	Oak Avenue Pavement Overlay	Overlay street.	\$200
MON-GRN021-GR	Citywide Street Rehabilitation	Repair, overlay, seal coat all city streets.	\$3,000

Table C-1e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-GRN022B-GR	Pine Avenue Overcrossing at US 101	Construct new bridge over US 101 to improve E/W traffic flow	\$4,000
MON-KCY043-CK	Roundabout @ US 101/Broadway St/San Antonio Dr	Install Roundabout @ US 101/Broadway St/San Antonio Dr	\$10,000
MON-KCY044-CK	Lonoak RR Crossing Improvements	Railroad crossing improvements	\$600
MON-KCY050-CK	7th Street / Monte Vista Area Repaving	7th Street / Monte Vista Repaving	\$500
MON-KCY051-CK	Broadway Circle Repaving	Broadway Circle Repaving	\$600
MON-KCY052-CK	Broadway Street Repaving	Broadway Street Repaving	\$800
MON-MAR002-MA	Imjin Parkway - 3rd Avenue Signal or Roundabout	Install new traffic signal or roundabout	\$1,200
MON-MAR005-MA	2nd Ave - 3rd St	Install new traffic signal or roundabout	\$250
MON-MAR006-MA	2nd Ave - 8th St	Install new traffic signal or roundabout	\$250
MON-MAR007-MA	2nd Ave - 10th St	Install new traffic signal or roundabout	\$550
MON-MAR009-MA	Abdy Way, Cardoza to Healy	Intersection redesign and construct new sidewalk and pavement	\$200
MON-MAR035-MA	Del Monte Blvd - Marina Green Dr	Install new traffic signal or roundabout (Project triggered by Marina Station Subdivision - Associated with MAR114)	\$2,000
MON-MAR058-MA	Palm Ave @ TAMC RR	Widen/construct new gates. Project likely included in scope of MST's SURF Busway project at Palm/Del Monte and TAMC ROW	\$688
MON-MAR116-MA	California Avenue	Reconstruct roadway (Triggered by Dunes Phase 2 Completion)	\$2,000
MON-MAR118-MA	Del Monte Boulevard	Roadway improvements, sidewalk, utilities (Triggered by Marina Station Subdivision EIR)	\$2,347
MON-MAR138-MA	Imjin Parkway & California Avenue	Lane configuration improvements or roundabout	\$2,500
MON-MAR139-MA	Imjin Pkwy & Marina Heights Dr	Signalize or roundabout (part of MAR154)	\$1,000
MON-MAR141-MA	Imjin Pkwy & Reservation Rd	Lane configuration improvements (Part of MAR154)	\$1,000
MON-MAR145-MA	California Ave & Marina Heights Dr	Signalize or roundabout	\$870
MON-MAR147-MA	Imjin Pkwy & Preston Dr	Signalize or roundabout (part of MAR154)	\$870
MON-MAR148-MA	Melanie Rd & Vista Del Camino Rd	Regrade intersection (part of citywide PMP)	\$200
MON-MAR151-MA	Del Monte Blvd, Sta 42+00 to 48+00	Pavement, sidewalk and drainage improvements (part of MAR114)	\$1,856
MON-MAR152-MA	8th Street Reconstruction	Reconstruct roadway (associated with MAR025 and MAR031)	\$8,068
MON-MAR158-MA	Sign Retroreflectivity Program	City-wide sign upgrade, required by FHWA	\$91

Table C-1e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MAR159-MA	Pavement Management Program	City-wide roadway maintenance	\$17,052
MON-MAR166-MA	2nd Ave Improvements	Restripe to remove Class 2 bike lanes for 4-lane roadway	\$92
MON-MRY006-MY	Fremont - Aguajito Intersection Improvements	Widen north leg for left turn pocket; modify signal to 8-phase operations; provide median landscaping	\$2,000
MON-MRY008-MY	Lighthouse and Foam Corridor Operational Improvements	Implement operational improvements on Lighthouse and Foam including installing traffic signal adaptive system on Lighthouse and Foam	\$3,000
MON-MRY009-MY	Mar Vista and Soledad Storm Drains	Extend storm drains to Mar Vista and Soledad	\$800
MON-MRY011-MY	Munras - Webster Improvements	Intersection improvements	\$650
MON-MRY017-MY	Munras - Soledad intersection Improvements	Capacity and operational improvements and bike ped safety improvements	\$3,000
MON-MRY018-MY	York Road Improvements	Road rehabilitation, widening, bikelanes and signal installations and modification	\$6,000
MON-MRY019-MY	Sloat - Mark Thomas Intersection Improvements	New left turn lane and intersection improvements; install bike detection for left-turning bicyclists.	\$700
MON-MRY021-MY	Citywide Street Overlay	Street overlay program	\$2,500
MON-MRY022-MY	Citywide Street Reconstruction	Street Reconstruction	\$3,000
MON-MRY023-MY	Citywide Street Panel Replacement	Street Panel Replacement	\$3,500
MON-MRY033-MY	Munras/El Dorado Roundabout	Construct Roundabout with bike improvements	\$5,000
MON-MRY034-MY	Citywide Adaptive Signal System	Install adaptive signal control on all arterial streets, install fiber connections to all signals	\$3,000
MON-MRY036-MY	Citywide Traffic Signal Pole Replacement	Citywide Traffic Signal Pole Replacement	\$20,000
MON-MRY039-MY	Install Protected Left Turns	Add protected left turns at signalized intersections based on SSARP recommendations	\$4,000
MON-MRY045-MY	Del Monte and Sloat Safety Improvements	Add left turn lane for Del Monte turning southbound onto Sloat	\$2,000
MON-MRY046-MY	Citywide Road Rehabilitation	Reconstruction of various streets	\$2,000
MON-MRY047-MY	Citywide Curb Ramps	Reconstruction of curb ramps	\$3,000
MON-MRY049-MY	Citywide Street Resurfacing	Street resurfacing program	\$2,000
MON-MYC043-UM	Jolon Rd Overlay Safety Improvements	Shoulder widening, & Geometric Improvements, and installation of 39.2 miles of Class II bikeway.	\$58,000
MON-MYC136-UM	Bridge Barrier Rail Replacement	Replace and rehabilitation of various bridges (Countywide)	\$500
MON-MYC154-UM	Crazy Horse Canyon Road Improvements	Add passing lanes and construct Class II bike lanes from San Juan Grade Rd to US 101.	\$27,900

Table C-1e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MYC156-UM	CVMP - Laureles Grade Paved Turnouts and Signs	Paved Turnouts and Signs	\$1,538
MON-MYC157-UM	CVMP - Carmel Valley Road btwn Laureles Grade and Ford Shoulder Widening	Shoulder Widening	\$2,308
MON-MYC159-UM	CVMP - Carmel Valley Road Passing Lanes (Front of September Ranch)	Passing Lanes in front of September Ranch	\$8,014
MON-MYC161-UM	CVMP - Grade Separation at Laurels Grade/Carmel Valley Road	Grade Separation	\$13,538
MON-MYC162-UM	CVMP - Laureles Grade at Carmel Valley Road Roundabout, Signalization, or Widening	Install Signal or Widen (prior to Grade Separation)	\$7,890
MON-MYC163-UM	CVMP - Laureles Grade Climbing Lane	Climbing Lanes and Class II bike lanes	\$3,077
MON-MYC164-UM	CVMP - Laureles Grade Shoulder Addition	Shoulder Improvements	\$5,105
MON-MYC165-UM	CVMP - Left-Turn Channelization - W of Ford Drive	Left-Turn Channelization	\$2,000
MON-MYC167-UM	CVMP - Sight Distance Improvements at Dorris	Sight Distance Improvements	\$2,377
MON-MYC181-UM	G12 San Miguel Canyon Corridor Project	Operational and capacity improvements, including road widening, turning lanes, signalization and intersection improvements, and bicycle and pedestrian facilities. Refer to project area 1 to 6 of the G12 Pajaro to Prunedale Corridor Study (Two Project Areas are listed individually as MYC311 & MYC313)	\$55,000
MON-MYC188-UM	Gonzales River Rd Bridge Replace	Bridge replacement	\$20,000
MON-MYC200-UM	Johnson Cyn Land - Phase I	Overlay Existing Roadways: Gloria, Iverson, and Johnson Cyn Rds	\$3,000
MON-MYC202-UM	Johnson Road Bridge	Bridge replacement	\$1,520
MON-MYC217-UM	Nacimiento Lake Dr Bridge No. 449	Replace current structure with two-lane approx. 300' long by approx. 28' wide bridge with associated retaining walls, approach road and right-of-way.	\$9,800
MON-MYC227-UM	Pine Canyon Road Improvements	Add turn lanes and Class II bike lanes on Pine Canyon Road from Pine Meadow Drive to Jolon Road (County Road G14). Construct traffic signal and perform intersection improvements on Pine Canyon Road at Jolon Road.	\$11,000

Table C-1e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MYC232-UM	Reservation Rd Slip Out	Backfilling slopes (keyed in/stepped), drainage systems, pavement reconstruct, guardrail, and erosion control/planting.	\$620
MON-MYC238-UM	Salinas Road Improvements	Widen to Four Lanes btwn Future Hwy 1 and Salinas Rd Interchange and Existing Four Lane Section. Widen existing three lane section of Salinas Rd from Werner Rd to Elkhorn Rd to four lanes. Add Class II bike lanes on Salinas Rd from SR 1 to Elkhorn Rd. Install roundabout [not traffic signal] and construct Intersection Improvements at Salinas Rd /Werner Rd. Construct traffic signal on Elkhorn Rd at Salinas Rd. Realign Salinas Rd and Werner Rd to intersect Elkhorn Rd at a single location with a traffic signal.	\$15,200
MON-MYC247-UM	San Miguel Cyn Rd at Castroville Blvd	Roundabout [not Signalization of the intersection], roadway widening, and striping improvements.	\$2,652
MON-MYC260-UM	Scenic Road Protection	Protect Scenic Rd from erosion due to wind & surf, and Carmel River.	\$92
MON-MYC266-UM	Street Rehabilitation/Overlay	Overlay roadways.	\$473,176
MON-MYC289-UM	RMA- PW&F Countywide Community Street Repair	Extend life of various streets - repair and seal various streets to continue providing transportation mobility (target areas include Chualar, Castroville, Pajaro and Boronda)	\$7,000
MON-MYC290-UM	Countywide Local Bridge Repair and Maintenance	Unspecified countywide local bridge repair and maintenance costs.	\$395,004
MON-MYC294-UM	Bradley Road Bridge Scour Repair	Placement of scour countermeasures to protect two exposed bridge pier footings. Includes placing rock slope protection, sheet pile or other control measures. Will extend 100-ft from each bridge face. (RMA-PW&F)	\$3,779
MON-MYC295-UM	Carmel Valley Road Repair	Project will stabilize the slope by constructing a permanent concrete barrier and/or placing rock slope protection (result of 2019 winter storms) (RMA-PW&F)	\$1,688
MON-MYC297-UM	Alisal Road Rehabilitation	Rehabilitate pavement of Alisal Road using pavement recycling techniques. (RMA-PW&F)	\$2,968
MON-MYC298-UM	Ongoing Seal Coat Program	Place chip seal on various roads consistent with 2015 Pavement Asset Management Plan. (RMA-PW&F)	\$12,000
MON-MYC299-UM	Emergency Repair Funds	Unanticipated emergency and non-emergency repairs to county facilities. (RMA-PW&F)	\$1,000
MON-MYC300-UM	HSIP Guardrail Replacement Project	Replace various metal beam guardrails throughout County. (RMA-PW&F)	\$600

Table C-1e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MYC301-UM	Streetsweeping Program under NPDES	Scheduled sweeping efforts, stenciling of drain inlets, monitoring storm drain outfall, code enforcement of private construction, inspections, public educations, detection of illicit discharge, staff training for NPDES stormwater inspection. (RMA PW&F)	\$1,080
MON-MYC302-UM	Proactive Drainage Maintenance and Flood Protection	Perform ongoing drainage maintenance at various locations. (RMA-PW&F)	\$2,700
MON-MYC303-UM	Roadway Safety Signage/Striping Audit	Conduct roadway safety/signage audit; based on findings conduct repairs?adjustments. (RMA-PW&F)	\$3,426
MON-MYC304-UM	Countywide Striping Program	Traffic safety maintenance project including painted striping--Contract Year 2 (RMA-PW&F)	\$600
MON-MYC305-UM	Unscheduled Repairs	Various repairs to the countywide facilities on an as needed basis. (RMA-PW&F)	\$903
MON-MYC306-UM	Vegetation Removal	Remove encroachment onto County roads/visibility such as vegetation. (RMA PW&F)	\$900
MON-MYC309-UM	Echo Valley Road Repair	Excavate and repair the road and including unplugging concrete culvert. (RMA-PW&F)	\$432
MON-MYC310-UM	Elkhorn/Werner/Salinas Safety Improvements	Intersection safety improvement project that includes signage and striping enhancements. (RMA-PW&F)	\$344
MON-MYC311-UM	Pajaro to Prunedale Corridor- Project Area 1	Project Area 1 is on San Miguel Canyon Rd, extending between US 101 and Castroville Blvd and includes: addition of a NB lane on San Miguel Canyon Rd between Moro Rd and Castroville Blvd; installation of traffic signal at San Miguel Canyon Rd between Moro Rd and Castroville Blvd; Install traffic signal at San Miguel Canyon Rd and Langley Canyon Rd; Providing signal coordination and adaptive timing btwn Langley Canyon Rd and US 101; Installing modern roundabout at San Miguel Canyon Rd and Castroville Blvd; Installing Class 1 bike path SB on San Miguel Canyon btwn the current bike lane and Prunedale North Rd; and installing sidewalk curb and gutter NB between	\$4,515

Table C-1e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MYC312-UM	G12 Pajaro to Prunedale Corridor Study- Project Area 6	Project area 6 project is on north end of G12 corridor in Pajaro and includes: implement road diet on Salinas Rd, reduce lanes from 4 to 2 lanes; Install a buffered bike lane; install a raised median south of railroad crossing/on Salinas Rd; Welcome sign for Pajaro; Class II Bike Lanes; Construct sidewalk at sidewalk gaps; install rectangular rapid flashing beacons at existing mid-block crossings; reconfigure the parking north of Bishop St on West side of G12 to be off-street; adjacent to roadway, construct curb and gutter, sidewalk, and landscaped buffer. Provide diagonal front-end parking; provide a 13' one-way Aisle for parking maneuvers, entry and exit; provide a 5'	\$1,950
MON-MYC313-UM	Gloria, Iverson, and Johnson Canyon Roads Rehabilitation	Reconstruction, grinding, and paving of existing pavement with hot mix asphalt and placement of reinforcing fabrics. (RMA-PW&F)	\$10,529
MON-MYC314-UM	Hartnell Road- Bridge Replacement (RMA-PW&F)	Replace existing two-lane box culvert/bridge over Alisal Creek. (RMA-PW&F)	\$3,183
MON-MYC315-UM	Las Lomas Drainage Project	Provide underground drainage facility on Los Lomas. (RMA-PW&F)	\$5,243
MON-MYC318-UM	River Road Rehabilitation	Rehabilitate roadway pavement using pavement reconstruction techniques and place hot-mix asphalt. (RMA PW&F)	\$7,712
MON-MYC319-UM	Monterey Dunes Road Repair	Fix collapsed culvert under Monterey Dunes Road; repair project will construct a permanent repair of the roadway including pipe replacement to restore underground water flow. (RMA-PW&F)	\$582
MON-MYC320-UM	Nacimiento Lake Drive Bridge No. 449 Replacement	Replacement of existing Nacimiento Lake Drive Bridge over San Antonio River. (RMA-PW&F)	\$9,826
MON-MYC321-UM	Palo Colorado Road	Repair from severe storm damage along Palo Colorado Road near Big Sur; rebuild the road with suitable fill, installation of soil nail walls, and improve stormwater drainage. MP 4.0 to MP 7.8 Emergency (RMA-PW&F)	\$10,887
MON-MYC322-UM	River Road Overlay	Extend life of River Road from Las Palmas Parkway to SR 68 through rehabilitation of pavement using pavement recycling techniques. (RMA PW&F)	\$5,187
MON-MYC323-UM	Robinson Canyon Road Bridge Scour Replacement	Replacement of scour countermeasures to protect two exposed bridge pier footings. (RMA-PW&F)	\$2,346
MON-MYC324-UM	Rogge Road Intersection Improvements	Construct intersection improvements. (RMA PW&F)	\$1,125
MON-MYC325-UM	San Juan Grade Road Erosion Damage	Stabilize the slope with construction of permanent concrete barrier and/or placing rock slope protection at MP 8.6. (RMA PW&F)	\$625

Table C-1e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MYC326-UM	Toro Road - Slope, Road, and Guardrail Repair	Repair roadway to its pre-storm condition including guardrail repair and pavement slope. (RMA PW&F)	\$558
MON-MYC331-UM	Viejo Road Shoulder and Asphalt Repair	Repair roadway to prestorm conditions. (RMA PW&F)	\$556
MON-PGV001-PG	Congress - Sunset Roundabout	Construct a roundabout at Congress and Sunset including ROW, landscaping, curb, and paving; make accommodations for bicyclists and pedestrians.	\$2,500
MON-PGV005-PG	Lighthouse Ave. Resurfacing	Resurface Street, drainage improvements	\$1,400
MON-PGV012-PG	Ocean View Blvd. Resurfacing	Repair and resurface street	\$7,680
MON-PGV013-PG	Pine Ave. Resurfacing	Repair and resurface street	\$11,800
MON-PGV014-PG	Miscellaneous Street Improvements - Various Streets	Pavement repair, cross gutter, curb and gutter, sidewalks, traffic striping, signs	\$800
MON-PGV015-PG	Miscellaneous Drainage Improvements - Various Streets	Storm drain repair / improvements, catch basins, manholes, cross gutters	\$800
MON-SCY003-SA	California Ave. - Playa Ave. Signal	Install new traffic signal with bike and pedestrian accommodations.	\$225
MON-SCY005-SA	Sand City Rehab in Old Town Area	Install street lighting, reconstruct streets in Old Town area; design shared streets.	\$3,500
MON-SCY013-SA	California Avenue Pavement Overlay	Overlay street; install class II/class III markings.	\$156
MON-SCY014-SA	Contra Costa St. Realignment	Realign Contra Costa St. to at Del Monte Ave.	\$500
MON-SEA005-SE	Fremont - Broadway	Roadway improvements, utility relocation, ADA ramps, landscaping and signal upgrade	\$387
MON-SEA028-SE	West Broadway Ave Corridor improvements	Corridor rehabilitation including intersection improvements, bikeways, road rehab	\$4,000
MON-SEA030-SE	Update and Implement Pavement Management System and Maintenance	Roadway improvements to include total reconstruction and overlay	\$58,951
MON-SEA039-SE	Broadway Corridor Improvements	Road diet and roundabouts along Broadway, from Fremont to General Jim. Includes complete streets elements- such as bike lanes on both sides of the road.	\$11,000
MON-SEA040-SE	General Jim Corridor Improvements	Roundabout installation intersection improvements along General Jim at Hilby, San Pablo, McClure, Normandy and Gigling	\$15,000
MON-SEA041-SE	Canyon Del Rey Corridor Improvements	Bike lanes, intersection improvements two roundabouts from Fremont Blvd to Del Monte Boulevard	\$17,500
MON-SNS011-SL	Boronda - Main Improvements	Construct intersection improvements	\$2,161

Table C-1e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-SNS024-SL	Elvee Drive Extension	Construct 49' span bridge and extend two lanes between Work to Elvee; Widen Elvee Drive from Sanborn Road to elbow of Elvee Drive	\$3,600
MON-SNS033-SL	Laurel Drive Intersection Improvements	Median Improvements / median left turn lanes btwn Adams St and Main St	\$583
MON-SNS041-SL	Maryal Drive Reconstruction	Widen roadway behind Rodeo Grounds (from 36' to 40')	\$1,260
MON-SNS042-SL	Natividad - Laurel Intersection	Install NB/SB lanes, convert EB right turn lane into shared thru	\$1,250
MON-SNS106-SL	Alisal Street Improvements	Add left turn channelizations at major intersections	\$33
MON-SNS107-SL	John Street Improvements	Add left turn channelization and eliminate on street parking	\$766
MON-SNS109-SL	San Juan Grade - Russell Rd Intersection Improvements	Install Signal	\$371
MON-SNS112-SL	Boronda Rd -East Constitution Intersection Improvements	Install Signal	\$546
MON-SNS113-SL	Boronda Rd - Sanborn Rd Intersection Improvements	Install traffic circle	\$6,535
MON-SNS114-SL	Boronda Rd - Williams Rd Intersection Improvements	Install Signal	\$5,224
MON-SNS115-SL	Natividad Rd - Russell Rd (Future Extension) Intersection Improvements	Install Signal	\$5,142
MON-SNS128-SL	Front Street/Sherwood/Rossi TS Coord	Signal Coordination on Front St/Sherwood Drive	\$450
MON-SNS142-SL	North Main Street Intersection Improvements	Traffic Signal/Intersection Control	\$800
MON-SNS144-SL	Boronda Road Roundabouts	Roundabouts at 4 intersections	\$44,000
MON-SNS147-SL	Sherwood Dr/Sherwood Place Intersection	Traffic Signal Installation	\$800
MON-SNS148-SL	Market Street/Merced	Traffic Signal Installation	\$800
MON-SNS149-SL	Sanborn Rd-Mayfair Intersection	Traffic Signal Installation	\$400
MON-SNS150-SL	Alisal Street-Capitol Intersection Improvements	Traffic Signal Installation	\$800

Table C-1e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-SNS151-SL	Alvin Drive-Linwood Intersection Improvements	Traffic Signal Installation	\$400
MON-SNS153-SL	Williams/Garner Intersection Improvements	Traffic Signal Installation	\$631
MON-SNS154-SL	Boronda/Sanborn Intersection	Roundabout Installation	\$400
MON-SNS155-SL	Constitution Blvd/Las Casitas Intersection Improvements	Traffic Signal Installation	\$800
MON-SNS157-SL	Davis Road/Chevron Station Intersection	Traffic Signal Installation	\$800
MON-SNS160-SL	Traffic Calming Projects	Traffic Calming Local	\$2,500
MON-SNS165-SL	Work Street	Overlay	\$500
MON-SNS260-SL	Alisal St and Murphy Street Traffic Signal	Install traffic signal	\$905
MON-SNS261-SL	Old State Road and Williams Rd Traffic Signal	Traffic signal installation	\$4,508
MON-SNS262-SL	Natividad and Rogge Road Traffic Signal	Install traffic signal	\$2,243
MON-SNS263-SL	N Main St and Bernal Dr Signal Modification	Install NBT lane, NBO phase, convert WBT to shared thru left	\$873
MON-SNS264-SL	Sherwood Dr/Natividad Rd & East Bernal Dr/La Posada Way Intersection Improvements	Install EB left turn lane, NB thru lane and SB thru lanes	\$2,062
MON-SNS265-SL	East Front St/Sherwood Dr/Market St Intersection Improvements	Installation of southbound left turn lane	\$6,433
MON-SNS266-SL	Salinas St/North Main/West Market/East Market Intersection Improvements	Install SB left turn lane and EB thru lane	\$1,321
MON-SNS267-SL	South Main St/West Blanco/East Blanco Intersection	Install NB left turn lane	\$489
MON-SNS268-SL	Sun St/Market St Install Traffic Signal	New traffic signal	\$800
MON-SNS269-SL	Airport Blvd/Terven Ave & SB US 101 On/Off Ramp Intersection Improvements	Signal modifications or roundabout	\$1,500

Table C-1e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-SNS270-SL	Blanco Rd/Sanborn Rd/Abbott St Intersection Improvements	Convert Shared through/left turn lanes to through lanes and adding a second left turn lane on the north and south Abbott St approaches	\$96
MON-SNS271-SL	Harkins Rd and Abbott St Intersection Improvements	Add a second westbound left-turn lane on Harkins Rd	\$645
MON-SNS272-SL	Harkins Rd and Hansen St Intersection Improvements	Install NB left, EB thru and EB right	\$221
MON-SNS273-SL	Airport Blvd and Hansen St Intersection Improvements	Install a second northbound right-turn lane on Hansen St	\$85
MON-SNS274-SL	Roy Diaz St and De La Torre St South Intersection Improvements	Install traffic signal	\$800
MON-SNS275-SL	Roy Diaz St and US 101 Northbound Ramps Intersection Improvements	Install traffic signal or roundabout	\$1,370
MON-SNS276-SL	Skyway Blvd and Airport Blvd Intersection Improvements	Install traffic signal or roundabout	\$1,370
MON-SNS277-SL	Constitution Blvd/Medical Center Driveway Intersection Improvements	Install traffic signal	\$800
MON-SNS283-SL	Road Maintenance and Rehabilitation	Road maintenance using the Pavement Management Systems	\$140,000
MON-SOL007-SO	Street Resurfacing & Sidewalk Repair	Apply seal coats and resurface various local streets. Construct missing sidewalk and handicap ramps. Replace broken sidewalk and ramps. Mark bike facilities.	\$2,135
MON-SOL030-SO	Front St and Hector de la Rosa St Intersection Improvements	Install signal	\$854
MON-SOL031-SO	Front St and East St Intersection Improvements	Construct intersection, install signal	\$2,548
MON-SOL032-SO	SR 146/Metz Rd and SR 146 Bypass Intersection Improvements	Construct intersection, install signal	\$1,721
MON-SOL033-SO	Front St/Gabilan Dr Intersection Improvements	Construct intersection, install signal/roundabout	\$2,883

Table C-1e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-SOL034-SO	New Arterial 1 and Camphora Gloria Intersection Improvements	Construct intersection, install signal	\$2,120
MON-SOL035-SO	New Arterial 1/Front St Extension Intersection Improvements	Construct intersection, install signal	\$2,878
MON-SOL036-SO	New Arterial 1/San Vincente Rd Intersection Improvements	Construct intersection, install signal	\$2,503
MON-SOL037-SO	New Arterial 1/West St Intersection Improvements	Construct intersection, install signal	\$2,119
MON-SOL038-SO	West Street Extension/Camphora Gloria Rd Intersection Improvements	Construct intersection, install signal	\$2,262
MON-SOL039-SO	West St Extension/San Vincente Rd Intersection Improvements	Construct intersection, install signal	\$2,879
MON-SOL040-SO	West St Extension/San Vincente Rd Intersection Improvements	Construct intersection, install signal	\$2,584
MON-SOL042-SO	Gabilan Dr/Sn Vincente Rd Intersection Improvements	Construct intersection and install signal	\$324
MON-SOL053-SO	Andalucia Drive and Gabilan Drive Intersection Improvements	Intersection Improvements (2013 TIF M1); install signal	\$467
MON-SOL076-SO	Traffic Signals	Traffic Signals (2007 TIF M1, 2013 TIF M1 remainder); construct traffic signals at 4 locations	\$20,166
MON-SOL079-SO	Pavement Maintenance 2020-2021 -1	Pavement Maintenance 2020-2021 - 1; apply seal coats and resurface	\$2,000
MON-SOL080-SO	Pavement Maintenance 2020-2021 -2	Pavement Maintenance 2020-2021 - 2; apply seal coats and resurface	\$2,000

Table C-1f: Monterey County Other Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MAA002-MAA	Environmental Assessment	EA for Runway and Parallel Taxiway A extension to west, apron expansion west end, acquire land - 11.4 acres for RPZ	\$600
MON-MAA006-MAA	Environmental Assessment	Conduct Environmental assessment for construction improvements including hangar infill projects	\$150
MON-MAA015-MAA	Environmental Assessment	EA for North area of airport including north-side parallel Taxiway B, north perimeter aviation access road and development for approximately 250 acres aviation and mixed use	\$500
MON-MAA021-MAA	Pavement Rehabilitation	Pavement rehabilitation at various areas throughout the airport in accordance with the PMMP	\$600
MON-MAA027-MAA	Airport Utility Upgrades	Replacements, extensions and enhancements to existing water, sanitary sewer, and cable and wire infrastructure	\$7,500
MON-MAA028-MAA	Rehabilitate Existing Airport Buildings	Rehabilitate former military buildings including ADA facilities and upgrades, new roofs, building skin, structural retrofits, glazing and heat systems	\$12,300
MON-MAA029-MAA	Rehabilitate Airport Access and Service Roads	Localized removal and reconstruction of failed areas, asphalt pavement overlay, curb and gutter repair upgrades including ADA, and road widening	\$11,600
MON-MDR001-MDR	Airport Land Use Compatibility Plan Update	Update Airport Land Use Compatibility Plan (ALUCP)	\$154
MON-MDR002-MDR	Taxiway Reconstruction & Rehabilitation (Design)	Design of Taxiway reconstruction and rehabilitation	\$105
MON-MDR003-MDR	Taxiway Reconstruction & Rehabilitation (Construction)	Construction of taxiway rehabilitation and reconstruction	\$1,780
MON-MDR005-MDR	Apron Rehabilitation (Design)	Design of Apron Rehabilitation	\$250
MON-MDR006-MDR	Instrument Approach Feasibility Study & AWOS (Design)	Instrument Approach Feasibility Study & AWOS (Design Only)	\$160
MON-MDR008-MDR	AWOS (Construction)	AWOS (Construction)	\$300
MON-MDR009-MDR	Wildlife Hazardous Environmental Assessment	Wildlife hazardous environmental assessment	\$120
MON-MPA061-MRA	Terminal Complex - Construction (Terminal Building)	Construct Terminal Building	\$64,000
MON-MPA062-MRA	Terminal Complex - Construction (Roads & Surface Parking)	Construct Roads and Surface Parking	\$28,231
MON-SAP026-SLA	Master Plan Env'l Assessment	Perform NEPA/CEQA environmental process	\$300
MON-SAP039-SLA	Environmental Study RSA Improvements	Environmental Study RSA Improvements	\$500
MON-SAP040-SLA	Enhance RSA, Runway 13-31	Runway Improvements to Meet Standards	\$960

Table C-1f: Monterey County Other Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-SAP041-SLA	Enhance RSA, Runway 8-26	Runway Improvements to Meet Standards	\$20,790
MON-SAP043-SLA	Master Plan	Perform airport master plan	\$120,000
MON-TAMC009-TAMC	Habitat Preservation/ Advance Mitigation	Countywide Habitat Preservation/Advance Mitigation for projects	\$5,000

Table C-1g: Monterey County Traffic Demand Management Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-TAMC005-TAMC	Monterey County Go831 Traveler Information and Rideshare/Commute Alternatives	Administer Go831 Traveler Information program and rideshare/Commute Alternative programs for Monterey County.	\$5,250

Table C-1h: Monterey County ADA Transit Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MST014-MST	Mobility Management	Mobility Management	\$92,000
MON-MST015-MST	RIDES Bus Replacement	RIDES Bus Replacement	\$16,000
MON-MST017-MST	RIDES Operations	RIDES Operations	\$137,819
MON-TAMC012-TAMC	Senior & Disabled Transportation	Countywide support for Senior & Disabled Transportation	\$15,000

Table C-1i: Monterey County Transit Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-KCY053-CK	King City Multimodal Transit Station	Build new multimodal transit station; includes new Amtrak connection to Coast Rail Line. Element of Coast Rail Project (TAMC004) Includes Bike / pedestrian connections and parking	\$35,000
MON-MST008-MST	Salinas-Marina Multimodal Corridor	Construct multimodal Bus Rapid Transit Improvements between Salinas and Marina, including a multimodal transit corridor through the former Fort Ord in Marina.	\$60,000
MON-MST011-MST	Salinas Bus Rapid Transit	Construct Bus Rapid Transit improvements along E. Alisal Street.	\$20,000
MON-MST016-MST	Transit Capacity for SR 1/Surf! Busway and BRT	Construct improvements to accommodate regional MST bus service along the TAMC Branch Line during peak travel periods and construct 5th Street Station.	\$52,000
MON-TAMC003-TAMC	Rail Extension to Monterey County- Phase 1, Kick Start Project	Extends existing rail service from Gilroy to Salinas and constructs station improvements in Gilroy and Salinas. Kick Start project (phase 1) to be completed by 2022 constructs Gilroy and Salinas station and track improvements.	\$81,500
MON-TAMC014-TAMC	Rail Extension to Monterey County - Phase 2, Pajaro/Watsonville Station	Constructs the Pajaro/ Watsonville passenger rail/multimodal station	\$68,500
MON-TAMC015-TAMC	Rail Extension to Monterey County - Phase 3, Castroville Station	Constructs the Castroville passenger rail/multimodal station	\$34,000

Table C-1j: Monterey County Transit Operations

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MST002-MST	Bus Operations	General operations for fixed route and public demand response services (On-call)	\$931,821

Table C-1k: Monterey County Transit Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MST003-MST	Bus Station/Stops	General transit station and stop improvements	\$42,000
MON-MST004-MST	Bus Support Equipment and Facilities/Intelligent Transportation Systems (ITS)	Bus Support Equipment and Facilities/Intelligent Transportation Systems (ITS)	\$20,000
MON-MST005-MST	Communication/Radio Equipment	Communication/Radio Equipment	\$30,000
MON-MST006-MST	Preventative Maintenance	Preventative Maintenance	\$21,000
MON-MST007-MST	Safety and Security	Safety and Security	\$2,000
MON-MST009-MST	Operations & Maintenance Facilities	Maintenance and Operations Facilities including: \$12M Measure X for Salinas Maintenance & Ops Facility & \$10.3M Measure X for S County Maintenance & Ops Facility (under construction, estimated to be completed in late 2021 or early 2022)	\$100,000
MON-MST010-MST	Bus Replacement	Combining MON-MST001-MST and MON-MST010-MST	\$100,000
MON-MST012-MST	Bus Rehab/Renovate	Bus Rehab/Renovate	\$28,400
MON-MST018-MST	South Monterey County Regional Transit Improvements	Increases the frequency of MST Line 23 service between King City and Salinas and constructs improvements along Abbott Street between US 101 and Romie Way in Salinas. Stops in King City, Greenfield, Soledad, Gonzales, Chualar and Salinas.	\$27,500
MON-SNS120-SL	Salinas ITC Station Improvements	TAMC Lead - Upgrades to passenger terminal and freight buildings	\$2,300

Table C-1I: Monterey County Transportation System Management Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MRY015-MY	Traffic Signal Operational Improvements to Pacific, Franklin and Munras Corridors	Install traffic signal adaptive system and upgrade signal infrastructure	\$382

Table C-2a: San Benito County Active Transportation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SB-COG-A57	Safe Routes to Schools Implementation Program	Infrastructure improvements to achieve safer routes to schools for walking and bicycling at R.O. Hardin & Calaveras Elementary Schools. Lead agency role will vary from the City of Hollister, County and the Hollister School District.	\$1,126
SB-COH-A20	Sunnyslope Road Bike Lane	Construct Class II bike lane from Cerra Vista to Memorial Drive	\$21
SB-COH-A23	Ladd Lane Bike Lane	Traffic calming measures on Ladd Lane and Southside Road to reduce vehicle speeds and improve safety for pedestrians and cyclists.	\$184
SB-COH-A24	South Street/Hillcrest Road Bike Lane	Construct Class II bike lane from McCray St. to proposed Class II on Hillcrest Road	\$14
SB-COH-A25	Central Avenue Traffic Calming Project	Traffic calming enhancements between Bridge Road and East Street.	\$505
SB-COH-A26	Memorial Drive Bike Lane	Construct Class II bike lane from Sunset Dr. to Meridian St.	\$34
SB-COH-A28	Fourth Street Bike Route	Construct Class III bike route from McCray Street to Westside Boulevard.	\$11
SB-COH-A29	Sally Street Bike Route and Traffic Calming Project	Construct Class III bike route from Nash Rd. to 4th St., road rehabilitation, and traffic calming measures.	\$570
SB-COH-A30	Meridian Street Bike Lane	Construct Class II bike lane from Memorial Drive to McCray Street.	\$32
SB-COH-A31	San Felipe Road Bike Lane	Construct Class II bike lane from Santa Ana Road to Northern San Benito County.	\$197
SB-COH-A32	Sunset Drive Bike Route	Construct Class III bike Route from Cerra Vista Road to Airline Highway.	\$11
SB-COH-A33	Hillcrest Road Bike Lane	Construct Class II bike lane from Fairview Road and proposed Class III bike route on Hillcrest Road.	\$53
SB-COH-A36	Monterey Street Bike Route	Construct Class III bike route from Nash Road to 4th Street	\$14
SB-COH-A60	Complete Streets Project for Nash/Tres Pinos/Sunnyslope Roads and McCray Street	Complete street segments include: sidewalks, bike lanes, curb extensions, median islands, narrower travel lanes, roundabouts and more.	\$6,760
SB-COH-A66	McCray Street Bike Lane	Class II, 0.61 miles, Hillcrest to Santa Ana Road.	\$18
SB-COH-A67	Cerra Vista Bike Lane	Class III Bike Route, 0.73 miles, Union Road to Sunnyslope Road.	\$10
SB-COH-A68	Hawkins Street Bike Route	Class III, 0.45 miles, Monterey Street to Prospect Avenue.	\$6
SB-COH-A69	Clearview Drive Bike Route	Class III, 1.15 miles, Sunset Drive to Meridian Street, Tier No. 2.	\$15

Table C-2a: San Benito County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SB-COH-A70	Steinbeck Drive Bike Lane	Class III, .10 miles, Line Street to Westside Boulevard, Tier No. 3.	\$1
SB-COH-A71	Meridian Road Bike Lane	Class III, .47 miles, End of Meridian Road to Memorial Drive.	\$6
SB-COH-A72	Bridgevale Road Bike Lane	Class III, .26 miles, from Fourth Street (Previously San Juan Road) to Central Avenue, Tier No. 3.	\$3
SB-COH-A73	Beverly Drive Bike Lane	Class III, .53 miles, Sunnyslope Road to Hillcrest Road, Tier No. 3.	\$7
SB-COH-A79	Westside Boulevard Bike Lane	Class II, .28 miles, between South Street and Jan Avenue.	\$5
SB-SBC-A22	Airline Highway Bike Lane	Class I bike path from Sunset Drive to existing Class I on Airline Hwy (Tres Pinos Town).	\$42
SB-SBC-A34	Santa Ana Road/Buena Vista Road/North Street Bike Lane	Construct Class II bike lane, 3.97 miles, partially located in the City of Hollister.	\$118
SB-SBC-A60	Highway 156 Bike Lane	Class II, 6.88 miles, The Alameda (San Juan Bautista) to Buena Vista Road (Hollister).	\$205
SB-SBC-A61	Valley View Drive Bike Lane	Class II, 0.52 miles, Sunset Drive to Union Road.	\$9
SB-SBC-A62	The Alameda - Salinas Road Bike Route	Class III, 0.65 miles, 4th Street to Old Stagecoach Road.	\$9
SB-SBC-A63	Union Road Bike Lane	Class III, 3.83 miles, Highway 156 to Cienega Road.	\$51
SB-SBC-A64	Buena Vista Road Bike Route	Class III, 0.74 miles, Proposed Class II on Buena Vista to Highway 156.	\$10
SB-SBC-A65	San Benito River Recreational Trail Phase 1	Construct a portion of recreational bicycle/pedestrian/equestrian trail along the San Benito River.	\$5,627
SB-SBC-A66	San Benito River Recreational Trail Phase 2	Construct a portion of recreational bicycle/pedestrian/equestrian trail along the San Benito River.	\$8,538
SB-SBC-A68	Union Pacific Railroad Multi-Use Path	Class I, 8.81 miles. Construct a multi-use path adjacent to the Union Pacific Railroad right of way.	\$7,800
SB-SBC-A80	Fallon Road Bike Route	Class III, 2.29 miles, Fairview Road to Frontage Road, Tier 3. Located in the City and County.	\$30
SB-SBC-A85	San Juan - Hollister Road Bike Lane	Stripping a bike lane on San Juan - Hollister Road.	\$10
SB-SJB-A06	Pedestrian Crosswalk at Intersection of The Alameda & Hwy 156	Install meters, screens and stripe on east side of The Alameda & Highway 156.	\$75
SB-SJB-A11	Third Street Bike Lane	Striping a bike lane on Third Street.	\$25
SB-SJB-A12	First Street Bike Lane	Striping a bike lane on First Street.	\$25

Table C-2a: San Benito County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SB-SJB-A13	Fourth Street Bike Lane	Striping a bike lane on First Street.	\$35
SB-SJB-A17	Franklin Street Bike Lane	Class III, .17 miles, 4th Street to South side of San Juan Bautista Historic Park, S-6 of the Bike Plan.	\$10
SB-SJB-A18	4th Street - San Jose Bike Lane	Class II, 0.16 miles, 4th Street to North side of San Juan Bautista Historic Park.	\$5
SB-SJB-A19	San Jose Street - The Alameda Bike Lane	Class III, .54 miles, 4th Street from San Jose to Monterey Street, S-8 of Bike Plan.	\$10
SB-SJB-A20	Second Street Bike Lane	Class III, 0.14 miles, San Jose Street to Monterey Street.	\$10
SB-SJB-A23	1st Street Bike Lane	Class III, 0.10 miles, Monterey Street to existing Class II on 1st Street.	\$35
SB-SJB-A26	The Alameda - Salinas Road Bike Route	Class III - Striping a bike lane from Franklin to Old SJ Hollister Rd., S-10 of the Bike Plan.	\$50

Table C-2b: San Benito County Highway Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SB-CT-A01	San Benito Route 156 Improvement Project San Juan Bautista to Union Road	Construct a four-lane expressway south of the existing State Route 156 and use the existing SR 156 as the northern frontage road. Partial TIF	\$68,339
SB-CT-A17	Airline Highway Widening/SR 25 Widening: Sunset Drive to Fairview Road	Convert to 4 lane expressway from Sunset Drive to Fairview Road with bicycle lanes. TIF	\$28,214
SB-CT-A44	Route 25 Expressway Conversion Project, Phase 1	Convert to four lane expressway from San Felipe Road to Hudner Lane. Includes Area No. 1. SR - 25/SR156 interchange to Hudner Lane and Area No. 2-south of the SR 25/SR 156 interchange to San Felipe Road. Partial TIF.	\$106,000
SB-CT-A45	Route 25 Expressway Conversion Project, Phase 2	Convert to four lane expressway from Hudner Lane to County Line. Includes Area No 3. SR 25/SR 156 interchange to County line and Area No. 4 County line to Bloomfield Road. Partial TIF.	\$135,000
SB-CT-A55	U.S. 101: Las Aromitas: Monterey/San Benito County Line to State Route 156	Convert to 6 lanes from Monterey/San Benito County line to SR 156 in San Benito County.	\$196,000

Table C-2c: San Benito County Highway Operations, Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SB-CT-A02	SR 156/Fairview Road Intersection Improvements	Construct new turn lanes at the intersection. TIF	\$6,824
SB-CT-A43	SHOPP Group Lump Sum Project Listing	Varies, grouped project listing.	\$213,249
SB-CT-A57	SR 156 Bridge/Ramps at US 101 Operational Improvements (Caltrans EA: 05-1N910)	In San Benito County, At US 101/SR 156E interchange. Extend southbound US 101 connector and construct a ramp meter - Minor A	\$1,250

Table C-2d: San Benito County Local Streets and Road Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SB-COH-A11	Union Road (Formerly Crestview Drive) Construction	Construct new 2-lane road	\$11,000
SB-COH-A16	Memorial Drive South Extension: Meridian Street to Santa Ana Road	Construct 4-lane road extension with bicycle lanes. TIF	\$3,355
SB-COH-A18	Westside Boulevard Extension	Construct 2-lane road. Westside Boulevard Extension: Nash Road to Southside Road/San Benito Street Intersection with bicycle lanes. TIF	\$13,360
SB-COH-A55	Memorial Drive North Extension: Santa Ana Road to Flynn Road/Shelton Intersection	Construct new 4-lane road and extension with bicycle lanes. TIF	\$13,842
SB-SBC-A04	Union Road Widening (East): San Benito Street to Highway 25	Widen to 4-lane arterial with bicycle lanes. TIF	\$5,463
SB-SBC-A05	Union Road Widening (West) San Benito Street to Highway 156	Widen to 4-lane arterial with bicycle lanes. TIF	\$15,448
SB-SBC-A09	Fairview Road Widening: McCloskey to SR 25	Widen to 4-lane arterial; construct new bridge south of Santa Ana Valley Road with bicycle lanes. TIF	\$20,790
SB-SBC-A14	San Benito Regional Park Access Road	Construct new 2-lane roadway from Nash Road to San Benito Street.	\$162
SB-SBC-A50	Hospital Road Bridge	Hospital Road over San Benito River, between South Side Road and Cienega Road. Replace lane low water crossing with 2 lane bridge. Bridge No. 00L0026.	\$15,200
SB-SBC-A67	Shore Road Extension	4-Lane Arterial with Class II bike lanes.	\$20,350
SB-SBC-A79	Enterprise Road Extension	Extend Enterprise Road westerly from Southside Road toward Union Road.	\$3,000
SB-SBC-A81	Meridian Street Extension: 185 feet east of Clearview Road to Fairview Road	Construct 4-lane road. Located in the City of Hollister and County with bicycle lanes. TIF	\$9,445
SB-SBC-A82	Flynn Road Extension	San Felipe Road to Memorial Drive north Extension. New roadway construction south of McCloskey Road with bicycle lanes. Located within the City of Hollister and County. TIF	\$7,709
SB-SJB-A07	Third Street Extension	Constructing Third Street to connect to First Street.	\$450
SB-SJB-A09	Lang Street to Lang Street	Construct and connect Lang Street to The Alameda, 2 lanes.	\$800
SB-SJB-A14	Muckelemi Street to Muckelemi Street	Reconstruction of Muckelemi Street to Monterey Street adding planting strip median.	\$650

Table C-2e: San Benito County Local Streets and Road Operations, Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SB-COH-A13	West Gateway Improvement Project	Streetscape and intersection improvements.	\$4,237
SB-COH-A58	Westside Boulevard & Nash Road Westside Boulevard Extension (Intersection)	New signalization of 2-lane collector south leg (Westside Extension), existing 4-lane north leg with existing 2-lane local; 4 approaches, turning lanes will be added. TIF	\$575
SB-COH-A59	Westside Boulevard Extension (Intersection)	New signalization of new 2-lane collector (Westside Extension) with 2-lane arterial; 4 approaches, turning lanes will be constructed at Westside Boulevard & San Benito Street. TIF	\$500
SB-COH-A61	City of Hollister Local Street & Roadway Maintenance: 2020-2045	System preservation and maintenance.	\$113,401
SB-COH-A63	South Street & Westside Boulevard Intersection	New signalization of 4-lane collector with 2-lane collector; 4 approaches, retain current lane configuration. TIF	\$550
SB-COH-A64	Fourth Street (San Juan Road) & West Street or Monterey Street Intersection	New signalization of 2-lane collector with 2-lane local; 4 approaches, retain current lane configuration. TIF	\$400
SB-COH-A65	Memorial Drive & Hillcrest Road Intersection	New signalization of 4-lane arterial with 4-lane arterial, 4 approaches. Existing lane configuration to remain with bicycle lanes. TIF	\$700
SB-COH-A74	Flynn Road & San Felipe Road Intersection	New signalization of 4-lane arterial with 4-lane arterial. TIF	\$800
SB-COH-A75	Memorial Drive & Santa Ana Road Memorial Drive South Extension (Intersection)	New signalization of future 4-lane arterial (Memorial) with non-TIMF widening to 4-lane arterial: 4 approaches, turning lanes will be constructed.	\$800
SB-COH-A76	Memorial Drive South Extension: Meridian Street to Memorial Drive (Intersection)	New signalization of future 4-lane arterial (Memorial) with 4-lane arterial; 4 approaches, turning lanes will be constructed. TIF	\$800
SB-COH-A77	Gateway Drive & San Felipe Road Intersection	New signalization of new 2-lane collector with 4-lane arterial; 3 approaches, LTO's exist. TIF	\$525
SB-COH-A78	Rancho Drive & East Nash (Tres Pinos Road) Intersection	New roundabout. TIF	\$700
SB-SBC-A52	Union Road Bridge	Union Road Over San Benito River, East Cienega Road. Replace bridge, no added capacity. Bridge No. 43C0002. HBP	\$47,048
SB-SBC-A53	Panoche Road Bridge (Bridge No. 43C0016)	Panoche Road over Tres Pinos Creek, 6 Mi. E of SH 25. Scour Countermeasure. Bridge No. 43C0016. HBP	\$3,700

Table C-2e: San Benito County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SB-SBC-A54	Panoche Road Bridge (Bridge No. 43C0027)	Panoche Road, over Tres Pinos Creek, 12 miles west Little Panoche Road. Replace 1-lane bridge with 2-lane bridge. Bridge No. 43C0027. HBP	\$4,825
SB-SBC-A56	Rosa Morada Bridge	Rosa Morada Rd over Arroyo Dos Picachos, 0.6 Mi E Fairview Road. Replace bridge (no added lane capacity) Bridge No. 43C0041. HBP	\$3,300
SB-SBC-A57	Limekiln Road Bridge	Limekiln Road over Pescadero Creek, 0.1 Mi S Cienega Road. Replace 1-lane bridge with 2-lane bridge. Bridge No. 43C0054	\$2,800
SB-SBC-A58	Rocks Road Bridge	Rocks Road over Pinacate Rock Creek, East Little Merrill Road. Replace 1-lane bridge with 2-lane bridge. Bridge No. 43C0053. HBP	\$2,540
SB-SBC-A59	Anzar Road Bridge	Anzar Road over San Juan Creek, 0.35 Miles with San Juan Hwy Road. Replace 2-lane with 2-lane bridge (no added capacity) Bridge No. 43C0039. HBP	\$2,870
SB-SBC-A69	Fairview Road & Hillcrest Road Intersection	New signalization of future widening to 4-lane arterial (north & south legs) with future non-TIMF widening to 4-lane arterial (west leg only); 3 approaches. Turning lanes existing on all approaches, SB & NB through lanes will be constructed with Fairview Road widening. TIF	\$600
SB-SBC-A70	Union Road & Fairview Road Intersection	New signalization of future widening to 4-lane arterial (north & south legs) with future new 4-lane arterial (west leg only); 3 approaches. Turning lanes on Fairview Road added with Project No. 8; turning lanes on Union Road. Included as regional component of developer-constructed improvements. TIF	\$655
SB-SBC-A71	Enterprise Road & Airline Highway (SR 25) Intersection	New signalization of future widening to 4-lane arterial (north & south legs) with 2-lane arterial; 4 approaches, EB & WB through lanes will be constructed with Airline Hwy Project No. 5 with bicycle lanes. TIF	\$700
SB-SBC-A73	McCloskey Road & Fairview Road Intersection	New signalization of 4-lane arterial with 2-lane local, 3 approaches. LTO on lanes 3 approaches, RTO on 2 approaches. TIF	\$734
SB-SBC-A74	Meridian Street & Fairview Road Meridian Street Extension (Intersection)	New signalization of 4-lane arterial with 4-lane arterial: 3 approaches, turning lanes exist, through lane on Fairview will be constructed. TIF	\$600
SB-SBC-A75	Fairview Road & Fallon Road Intersection	New signalization of 4 lane arterial with 2-lane collector, 4 approaches. LTO & RTO on all approaches. TIF	\$1,500

Table C-2e: San Benito County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SB-SBC-A77	San Benito County Local Street & Roadway Maintenance: 2020-2045	System preservation and maintenance.	\$131,313
SB-SBC-A83	Fairview Road & Airline Highway/SR 25 Intersection	New signalization of 4-lane arterial (east & west legs) with 4-lane arterial (north leg) & 2-lane (south leg). LTO & RTO existing on all approaches, EB & WB through lanes constructed. County and Caltrans. TIF	\$850
SB-SBC-A84	SR 156 & Buena Vista Road Intersection	New signalization of new 2-lane collector with 4-lane arterial, LTO on 4 approaches. County and Caltrans. TIF	\$765
SB-SBC-A86	John Smith Realignment at Fairview Intersection	This project will realign John Smith Road to intersect Fairview Road at St. Benedict Way and add left and right turn lanes into John Smith Road.	\$2,200
SB-SBC-A88	Carr Avenue Bridge Project	Potential bridge replacement. The bridge is located on Carr Avenue, 0.23 miles east from Carpenteria Road intersection.	\$657
SB-SJB-A02	Roundabout at Muckelemi Street & Monterey Street	Constructing a roundabout.	\$450
SB-SJB-A03	Roundabout at Muckelemi and Fourth Street	Slight widening/re-paving and construction of roundabout.	\$450
SB-SJB-A04	Roundabout at Old San Juan - Hollister Road & San Juan Canyon Road	Constructing a roundabout and repaving.	\$250
SB-SJB-A05	Roundabout at Third Street & Donner Street	Striping a roundabout widening Third Street.	\$250
SB-SJB-A15	City of San Juan Bautista Local Street & Roadway Maintenance: 2020-2030	System preservation and maintenance.	\$9,553
SB-SJB-A25	Roundabout at First Street & Lavagnino Road	Constructing a roundabout.	\$400

Table C-2f: San Benito County Other Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SB-COG-A58	COG Planning and Administration	COG and LTA short and long range transportation planning studies. Transportation Development Act (TDA) for COG Administration, transit, bicycle & pedestrian facilities, approx.	\$40,000
SB-COH-A40	Hollister Airport Operations and Maintenance 2020-2045	Continued operations and maintenance of the airport.	\$22,500
SB-COH-A41	Hollister Airport Capital Improvement Program	Capital improvements grouped project list 2020-2026 from the Airport Capital Improvement Program. Project need for years 2027 and beyond are not available.	\$10,574

Table C-2g: San Benito County Transportation Demand Management Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SB-COG-A08	Regional Rideshare Program	Promote the use of alternative modes of transportation.	\$125
SB-COG-A53	Vanpool Program	Provide vehicle lease program, planning and coordination.	\$525

Table C-2h: San Benito County Transit Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SB-LTA-A46	Regional Transit Connection to Salinas	Transit connection from City of Hollister to City of Salinas.	\$3,113
SB-LTA-A47	Regional Transit Connection to Watsonville	Transit connection from City of Hollister to City of Watsonville.	\$3,124
SB-LTA-A53	Passenger Rail to Santa Clara County	Commuter rail from Hollister to Gilroy	\$87,247

Table C-2i: San Benito County Transit Operations Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SB-LTA-A37	General Transit Service Operations	Ongoing operations of County Express and Specialized Transportation Services, including services outside of San Benito County.	\$54,800
SB-LTA-A42	Regional Transit Planning	Planning transit infrastructure, new service and operational improvements, including transitioning to zero emission fleet.	\$2,500
SB-LTA-A52	Transit Technology and Infrastructure Improvements	Improve transit infrastructure to accommodate operations.	\$840
SB-LTA-A54	Bus Beside Rail to Santa Clara County	Constructing a single-lane bus route beside the existing rail, allowing bypassing traffic congestion.	\$51,510

Table C-2j: San Benito County Transit Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SB-LTA-A48	Transit Vehicle Replacements	Replace transit vehicles.	\$5,337
SB-LTA-A51	Bus Stop Improvement Program	Provides bus stop improvements, such as benches, shelters, and other amenities.	\$2,751

Table C-2k: San Benito County Local Streets and Road Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SB-COG-A44	Emergency Motorist Aid System (SAFE)	Emergency Call Box Program and additional CHP safety patrol are administered by the Service Authority for Freeways and Expressways (SAFE)	\$1,300
SB-COG-A56	Intelligent Transportation Systems Lump Sum Projects	Implement projects identified in the Central Coast Intelligent Transportation Systems Plan.	\$7,355

Table C-3a: Santa Cruz County Active Transportation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
CAP 17SC	Upper Pacific Cove Parking Lot Pedestrian Trail and Depot Park Metro Development	Construct 4 foot wide pedestrian pathway along City owned Upper Pacific Cove Parking lot, adjacent to rail line (680'). Includes new signal for ped crossing over Monterey Avenue. Includes a new metro shelter located and landscaped setting along the rail corridor/Park Avenue.	\$743
CAP 21SC	Kennedy Drive Sidewalk	Construct approximately 550 feet of sidewalk along eastbound/south side of Kennedy Drive. Includes curb and gutter, retaining walls, and ADA curb ramps	\$223
CO 42bSC	Green Valley Rd Pedestrian Safety Project	Build 6-foot wide sidewalk with some curb and gutter on NW side of Green Valley Road from Airport Boulevard to Amesti Road (1800 ft).	\$390
CO 84 SC	Hwy 152/Holohan - College Intersection	Intersection capacity enhancements and signal modifications, pedestrian and bicycle safety improvements. Add sidewalks and bicycle lanes on Holohan Rd, an additional left-turn lane from Holohan to EB Hwy 152, sidewalk on north side of Hwy 152 from Holohan to Corralitos Creek bridge, adds crosswalks and speed feedback signs.	\$3,650
SC-CAP-P03-CAP	Upper Capitola Avenue Improvements	Installation of bike lanes and sidewalks on Capitola Avenue (Bay Avenue - SR 1) and sidewalks on Hill Street from Bay Avenue to Rosedale Avenue.	\$500
SC-CAP-P12-CAP	Monterey Avenue Multimodal Improvements	Installation of sidewalks and bike lanes in area near school and parks.	\$360
SC-CAP-P16-CAP	Clares Street Pedestrian Crossing	Construct signalized ped crossing 0.20 miles west of 40th Avenue.	\$250
SC-CAP-P42-CAP	Clares Street Bike Lanes/Sharrows	Evaluate and if found necessary, add bike lanes/sharrows to Clares.	\$100
SC-CAP-P44-CAP	Gross/41st Avenue Bicycle Intersection Improvement	Bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) from Gross E/B to 41st N/B.	\$100
SC-CAP-P46-CAP	40th Ave (at Deanes Ln) Bike/Ped connection	40th Avenue N/S bike/pedestrian connection at Deanes Lane.	\$10
SC-CAP-P47-CAP	41st Ave (Highway 1 South to City Limits) Crosswalks	Evaluate and if found necessary, increase number of crosswalks on 41st to closer to every 300 ft.	\$100
SC-CAP-P48-CAP	Capitola Mall (Capitola Rd to Clares) Bike Path	Separated bicycle facility through Capitola Mall parking lot to connect 38th Avenue bike lanes and 40th Avenue.	\$50
SC-CAP-P51-CAP	Citywide Sidewalk Program	Install sidewalks to fill gaps. Annual Cost \$50k/yr.	\$750
SC-CAP-P52-CAP	Citywide Bike Projects	Bike projects based on needs identified through the Bicycle Plan. These projects are in addition to projects listed individually in the RTP.	\$400

Table C-3a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-89-USC	Soquel Dr Buffered Bike Lane and Congestion Mitigation Project	Adaptive traffic signal control/transit signal priority at all 23 intersections between La Fonda Ave and State Park Dr; Protected bike lanes with striping/bollards for approximately 2.4 miles (4.8 miles bidirectional) and buffered bike lanes with striping for approximately 2.65 miles (5.3 miles bidirectional); 46 green bike boxes at 23 intersections for left turn movements; Pedestrian improvements including: 10 rectangular rapid flashing beacons at midblock crossings; 0.46 miles of new curb, gutter, retaining wall and sidewalk construction; 96 crosswalk upgrades, 12 sidewalk curb extensions; 100 ADA ramps; and reconstruction of 17 driveway and side street	\$27,000
SC-CO-P38-USC	Pajaro River Bike Path System	Construction of a Class 1 bike path along the levees and a Class 2 bikeway on Thurwatcher Road and Beach Road.	\$2,500
SC-CO-P41-USC	Countywide Sidewalks	Install sidewalks.	\$7,000
SC-CO-P46a-USC	San Lorenzo Valley Trail: Hwy 9 - Downtown Felton Bike Lanes & Sidewalks	Install sidewalks and bicycle lanes on Hwy 9 through downtown Felton.	\$3,500
SC-CO-P46b-USC	San Lorenzo Valley Trail: Hwy 9 - North Felton Bike Lanes & Sidewalks	Install sidewalk/pedestrian path on west side, shoulder widening to 5' for bicycle lanes from Felton-Empire/Graham Hill Road to Glen Arbor Road, Ben Lomond, including frontage of SLV elementary, middle and high schools. Includes new and replacement bike/ped bridges.	\$5,000
SC-CO-P50-USC	East Cliff Drive Pedestrian Pathway (7th - 12th Avenue)	Construct pedestrian pathway on East Cliff.	\$1,760
SC-CT-09-CT	Hwy 9 Felton Pedestrian Safety Improvements	Construct pedestrian path on Route 9 from the San Lorenzo Valley (SLV) High School to the intersection of Graham Hill Rd/Felton-Empire, plus signage and crosswalk improvements between Kirby St and Graham Hill Road.	\$15,800
SC-CT-P61-CT	Hwy 152 Corralitos Creek ADA	Construct accessible pathway, concrete barrier, retaining wall, curb, gutter and sidewalk to meet Americans with Disabilities Act (ADA) standards.	\$7,452
SC-CT-P69-CT	Pedestrian Signals #2: Hwys 1 and 129	Install Accesible Pedestrian Signal (APS) push buttons, Countdown Pedestrian Signal (CPS) heads, pedestrian barricades, and crosswalk signage to improve pedestrian and bicycle safety. (Project in MON, SCR, SLO and SB counties, PPNO2628).	\$4,580
SC-EA-02-USC	SRTS Youth Pedestrian and EA 02 Bicycle Safety Education (BikeSmart and WalkSmart)	EA will serve approximately 120 second grade classrooms with feet on the ground pedestrian safety education and 88 fifth grade classrooms with bike safety education and rodeos serving a total of 44 local schools.	\$450

Table C-3a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-RTC 27a-RTC	Monterey Bay Sanctuary Scenic Trail Network - Design, Environmental Clearance, and Construction	Design, environmental clearance and construction of the 32-mile rail component of the 50+ mile network of bicycle and pedestrian facilities on or near the coast, with the rail trail as the spine and additional spur trails to connect to key destinations. (Funded segments listed individually.)	\$121,000
SC-RTC 27b-RTC	Monterey Bay Sanctuary Scenic Trail Network (Coastal Rail Trail) - Maintenance & Operations	Ongoing maintenance rail trail corridor. Includes clean-up, trash/recycling removal, graffiti abatement, brush clearance, surface repairs (from drainage issues, tree root intrusion) etc. and encroachments (est. \$1Myr)	\$25,000
SC-RTC 27c-RTC	Monterey Bay Sanctuary Scenic Trail Network (Coastal Rail Trail) - Trail Management Program	Coordinate trail implementation as it traverses multiple jurisdictions to ensure uniformity; serve as Project Manager for construction of some segments; handle environmental clearance; coordinate use in respect to other requirements (closures for ag spraying, etc); solicit ongoing funding and distribute funds to implementing entities through MOUs; coordinate with community initiatives; etc.	\$7,550
SC-RTC-16-RTC	Bike Parking Subsidy Program	Subsidies for bicycle racks and lockers for businesses, schools, government agencies, and non-profit organizations are all eligible. Recipients are responsible for installation and maintenance of the equipment. Avg annual cost: \$25K/yr.	\$240
SC-RTC-P26-VAR	Countywide Pedestrian Signal Upgrades	Grant program to fund installation of accessible pedestrian equipment with locator tones including rapid flashing beacons and count down times etc. to facilitate roadway crossings by visually and mobility impaired persons.	\$1,035
SC-SC-23-SCR	West Cliff Path Minor Widening (David Way Lighthouse to Swanton)	Improve existing path.	\$520
SC-SC-P09-SCR	Sidewalk Program	Install and maintain sidewalks and access ramps.	\$5,500
SC-SC-P105-SCR	Market Street Sidewalks and Bike Lanes	Completion of sidewalks and bicycle lanes. Includes retaining walls, right-of-way, tree removals and a bridge modification.	\$1,030
SC-SC-P123-SCR	Soquel/Branciforte/Bike Lane Treatments (San Lorenzo River to Branciforte)	Consider bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) to address speed inconsistency and parking conflicts between bicyclists and vehicles.	\$410
SC-SC-P125-SCR	Citywide Safe Routes to School Projects - ATP	Projects to improve pedestrian and bicycle safety near schools.	\$1,404
SC-SC-P126-SCR	Almar Avenue Sidewalks	Fill gaps in sidewalks and access ramps to improve pedestrian safety.	\$200
SC-SC-P132-SCR	Swanton Blvd. Multi-Use Trail Connector	Install a 10-12 foot wide multi-use trail along Swanton, Delaware and Natural Bridges, completing a missing link.	\$1,900

Table C-3a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-SC-P133-SCR	San Lorenzo River Walk Lighting	Install pedestrian scale lighting on the Riverwalk. The San Lorenzo Riverwalk Lighting northern section, is funded in the amount of \$970,000 from an ATP grant. There still a need for another \$1M for the southern reach unconstrained.	\$970
SC-SC-P134-SCR	Ocean-Plymouth Multi-modal Transportation Improvements	Improve the bike and pedestrian connections through the intersection.	\$200
SC-SC-P137-SCR	Frederick St Park Accessible Ramp to Harbor	Install multi-use accessible ramp from park to Harbor to improve access.	\$300
SC-SC-P23-SCR	Delaware Avenue Complete Streets	Fill gaps in bicycle lanes, sidewalks and sidewalk access ramps.	\$150
SC-SC-P29-SCR	Morrissey Boulevard Bike Path over Hwy 1	Install a Class 1 bicycle and pedestrian facility on freeway overpass.	\$300
SC-SC-P30-SCR	Murray Street to Harbor Path Connection	Install a Class 1 bicycle/pedestrian facility to connect the Segment 9 Rail Trail project, for the east and west side of the harbor.	\$210
SC-SC-P35-SCR	San Lorenzo River Levee Path Connection	Install a Multi-Use bicycle/pedestrian facility connecting the end of the San Lorenzo River Levee path on the eastern side of the river, up East Cliff Drive near Buena Vista Ave.	\$2,070
SC-SC-P59-SCR	King Street Bike Facility (entire length)	Install Class 2 bike lanes on residential collector street which includes some parking and landscape strip removals and drainage improvements.	\$500
SC-SC-P69-SCR	Seabright Avenue Bike Lanes (Pine-Soquel)	Install Class 2 bike lanes on arterial street to complete the Seabright Avenue bike lane corridor and connect to bike lane corridor on Soquel Avenue and Murray. Includes removal of some parking and some landscape strips.	\$500
SC-SV-30a-SCV	Mt Hermon Road Sidewalk Connections	Fill gaps in sidewalks on Bluebonnet and Kings Village Rd. to improve access between middle school, library and park.	\$520
SC-SV-32-SCV	Sidewalk Masterplan Implementation	Installation or widening of sidewalks and ramps that are missing, damaged or do not meet current ADA requirements. May include signage for safety.	\$500
SC-SV-P05-SCV	Citywide Sidewalk Program	Install sidewalks to fill gaps. Annual Cost \$50k/yr	\$4,000
SC-SV-P100-SCV	Whispering Pines Dr (Mt Hermon-Lundy Ln) Separated Bikeways	Upgrade bike lanes to buffered bike lane or Class IV separated bikeway. From SRTS Plan	\$75
SC-SV-P21-SCV	Lockwood Lane Pedestrian Signal Near Golf Course	Construct a pedestrian signal at unprotected ped crossing on Lockwood Lane.	\$50
SC-SV-P30A-SCV	Blue Bonnet Lane and Kings Village Rd Sidewalk Infill	Add sidewalks to fill gaps in business district	\$250
SC-SV-P35-SCV	Bean Creek Road Sidewalks (SVMS to Blue Bonnet)	Fill gaps in sidewalks on Bean Creek Road.	\$410

Table C-3a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-SV-P41-SCV	Citywide Bike Lanes	Construction of additional bike lanes and paths citywide (including Green Hills).	\$2,060
SC-SV-P45-SCV	Scotts Valley Town Center Bicycle/Pedestrian Facilities	Bicycle and pedestrian facilities and circulation elements within planned development.	\$4,130
SC-SV-P49-SCV	Mt Hermon Road and Scotts Valley Drive - Crosswalks	Increase number of crosswalks on Mt Hermon/Scotts Valley Dr, update crosswalks to block pattern, add pedestrian treatments where necessary at intersections to decrease distance across using refuge islands. Add crosswalks to all sides of intersections (particularly an issue on Scotts Valley Dr). Add HAWK signals to provide a low delay signalized crossing opportunity at select locations. Examples include the Safeway Driveway on Mt. Hermon Rd, at Victor Square/Scotts Valley Dr., and at Tramell Way/Scotts Valley Dr.	\$515
SC-SV-P53-SCV	Mt Hermon Road to El Rancho Drive Bike/Ped Connection	New bike/ped connection between Mt Hermon Road and El Rancho Drive which could include improved bike/ped facilities on existing interchange or new bike/ped crossing.	\$1,030
SC-SV-P56-SCV	Bean Creek Road at SV Middle School driveway crosswalk improvements	Realign crossing and rebuild ADA ramp on west side. Upgrade crosswalk to high visibility. Source SRTS Plan	\$53
SC-SV-P74-SCV	Hacienda Way Intersection Modification and Improvements	Install curb extensions to reduce crossing distance. Reduce Hacienda Way to one lane at intersection. Look into undergrounding utility pole at northern corner of intersection. Source SRTS Plan	\$100
SC-SV-P79-SCV	Lockwood Lanes Sidewalk & Sharrows	Fill sidewalk gaps on south side of street. Install green backed sharrows. (short term)	\$90
SC-SV-P95-SCV	Highway 17 On/Off Ramp Bike & Pedestrian Improvements	Short term option to install leading pedestrian interval and curb extension at NE corner of intersection. Upgrade all crosswalks to high visibility. Install green bike conflict markings through intersection. Install bicycle detection at Glenwood/Scotts Valley Drive intersection approaches. Source SRTS Plan.	\$207
SC-SV-P99-SCV	Vine Hill School Rd (Glenwood Dr-Tabor Dr) Bike Lane Widening	Narrow travel lanes to 11' to widen bike lanes to 6'. Remove signs that indicate bike lanes are dependent on time of day. Source SRTS Plan	\$44
SC-UC-P33-UC	UCSC Bicycle Parking Improvements	Install bicycle parking facilities to serve bicycle commuters to the University.	\$520
SC-UC-P38-UC	Pedestrian Directional Map/Wayfinding System	Develop and install signs throughout campus.	\$520

Table C-3a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-VAR-P03-VAR	Bicycle Sharrows	Install sharrows (shared roadway marking) designating areas where bicyclists should ride on streets, especially when bicycle lanes are not available. To be implemented by local jurisdictions.	\$520
SC-VAR-P05-VAR	Bike-Activated Traffic Signal Program	Provide traffic signal equipment to ensure that the traffic signals will detect bicycles just as cars are detected and ensure that the appropriate traffic signal phase is activated by the bicycles.	\$1,030
SC-VAR-P08-VAR	Safe Paths of Travel	Regional program to construct and/or repair pedestrian facilities adjacent to high frequency use origins and destinations, particularly near transit stops.	\$3,100
SC-VAR-P10-VAR	Safe Routes to Schools Studies	Studies to assess pedestrian and bicycle safety near schools.	\$210
SC-VAR-P16-VAR	Bike Share	Establish and maintain an urban centered bike share program allowing county residents to access loaner bikes at key locations such as downtowns, transit centers, shopping districts and tourist destinations.	\$5,170
SC-VAR-P27-VAR	Complete Streets Implementation	Additional projects for complete streets implementation that would fall under the Complete Streets Guidelines.	\$20,000
SC-VAR-P28-VAR	Complete Streets Area Plan	Detailed complete street circulation and design plans, including consideration of multimodal green travelways, for areas identified for intensified development in Sustainable Communities Strategy.	\$400
SC-VAR-P29-VAR	Public/Private Partnership Bicycle and Pedestrian Connection Plan	Develop model for assisting local jurisdictions in working with private property owners to allow bicycle and pedestrian access through private property in areas identified for more intensified development in Sustainable Communities Strategy.	\$150
SC-VAR-P31-VAR	Uncontrolled Pedestrian Crossing Improvements	Implement improvements to uncontrolled pedestrian crossing such as painted and/or raised crosswalks, flashing beacons and pedestrian islands.	\$2,570
SC-VAR-P32-VAR	Bicycle Treatments for Intersection Improvements (ADD)	Add painted bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike detection and signals) at major intersections.	\$4,130
SC-VAR-P35-VAR	School Complete Streets Projects	Implement ped/bike programs and facilities near schools.	\$10,330
SC-VAR-P39-VAR	Active Transportation Plan	Prepare Active Transportation Plans that address bicycle, pedestrian, safe routes to schools and complete streets facilities within the jurisdictions of Santa Cruz County as well as the Santa Cruz Harbor Port District.	\$2,380
SC-VAR-P44-VAR	Electric Bicycle Commuter Incentive Program	Financial incentives, promotion and/or education to encourage residents to use electric bikes instead of commuting by car.	\$1,140

Table C-3a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-WAT-P19-WAT	Lump Sum Bicycle Projects	Update the City Bicycle Plan and construction of additional routes and paths (250k/yr).	\$3,125
SC-WAT-P36-WAT	Alley Improvements	Repair & reconstruct some alleys.	\$75
SC-WAT-P49-WAT	2nd/Maple Avenue (Lincoln to Walker) Traffic Calming and Greenway	Evaluate and if found necessary, add traffic calming/bicycle traffic priority with wayfinding signage to provide access to MBSST and create low stress grid around downtown.	\$30
SC-WAT-P50-WAT	5th Street (Lincoln to Walker) - Traffic Calming and Greenway	Evaluate and if found necessary, add traffic calming/bicycle traffic priority with wayfinding signage to provide access to MBSST and create low stress grid around downtown.	\$30
SC-WAT-P54-WAT	Main Street - 3 HAWK Signals	Evaluate and if found necessary, add Hawk signals in 3 locations on Main Street.	\$900
SC-WAT-P62-WAT	Freedom Boulevard Pedestrian Crossings (Airport to Lincoln)	Evaluate and if feasible, install new and improve existing uncontrolled pedestrian crossings at Roach Road, Davis Avenue, Clifford Lane, Mariposa Avenue, Alta Vista Street, Crestview Drive, Martinelli Street and Marin Street).	\$600
SC-WAT-P65-WAT	Upper Struve Slough Trail	Construction of 450 foot long pedestrian/bicycle path along upper Struve Slough from Green Valley Road to Pennsylvania Drive. The trail shall consist of a twelve-foot wide by one foot deep aggregate base section with the center eight feet covered with a chip seal. Additional improvements include installing a 130-length of modular concrete block retaining wall, reinforcing a 160-foot length of slough embankment with rock slope protection and installing a 175-foot long by eight foot wide boardwalk.	\$660
SC-WAT-P71-WAT	MBSSTN Walker St (Watsonville Slough Trailhead to Walker St	Construction of 2400-foot long pathway parallel to the railroad tracks. Path shall be twelve-foot width asphalt (hma). Modify drainage facilities east of Ohlone Parkway. Provide connection with Watsonville Slough Trail. Install at grade crossing at spur near Walker St. Modify existing parking area and pedestrian facilities at Walker St/West Beach St intersection.	\$3,400
SC-WAT-P75-WAT	Complete Streets - Downtown	Provide complete streets improvements including sidewalk, parking, bike lane, sharrows, curb bulb outs, high visibility crosswalks, striping, signage, street trees, pedestrian lighting, bus shelters, bike parking and benches	\$5,000
SC-WAT-P76-WAT	Complete Streets - Watsonville Schools	Provide complete streets improvements including sidewalk, bike lane, sharrows, curb bulb outs, high visibility crosswalks, striping, signage and pedestrian lighting.	\$4,000
SC-WAT-P81-WAT	Lee Rd Trail	Prepare environmental documents and construction plans, secure permits	\$700
TRL 05aSC	MBSST - North Coast Rail Trail: Segment 5 Phase 1	Monterey Bay Sanctuary Scenic Trail Network (MBSST) - ph. 1 Wilder Ranch-Coast Dairies (5.4 mi)	\$13,500

Table C-3a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
TRL 05bSC	MBSST - North Coast Rail Trail: Segment 5 Phase 2	2.1 miles of Class 1, 8 to 12 foot wide multi-use bicycle/pedestrian paved path with decomposed granite shoulders within the rail line right of way along the north coast of Santa Cruz County from Yellowbank Beach to Davenport. Project also includes Davenport crosswalk at Hwy 1/Ocean St and preliminary engineering and environmental compliance for parking lots at Yellowbank Beach and Davenport Beach and a path from the Bonny Doon parking lot to the rail trail.	\$8,700
TRL 07bSC	MBSST (Coastal Rail Trail): Segment 7-Phase 2 (Bay/California St to Pacific Ave/Wharf)	Bicycle/pedestrian pathway adjacent to railroad tracks. MBSST Segment 7-phase 2	\$11,000
TRL 07cSC	MBSST (Coastal Rail Trail): Segment 7-Phase 3 (Natural Bridges to Shaffer Rd)	Bicycle/pedestrian multiuse path adjacent to railroad tracks from Natural Bridges to Shaffer Rd crossing Antonelli Pond. MBSST Segment 7-phase 3	\$200
TRL 10-11	MBSST Rail Trail: 17th Ave-Jade St Park & Monterey Ave to Aptos Crk Road	Bicycle/pedestrian pathway parallel to railroad tracks through sections of Live Oak, Capitola, and Aptos. Segments 10 & 11 of Monterey Bay Sanctuary Scenic Trail Network (MBSST)/Rail Trail.	\$66,000
TRL 18L	MBSST (Coastal Rail Trail): Lee Road-Ohlone Pkwy	Construction of pathway parallel to the railroad tracks: includes asphalt path, retaining walls, fencing, drainage, at grade RR crossings, and installation of pathway or sidewalk to link to the existing sidewalk at Lee Road.	\$4,000
TRL 18W	MBSST Rail Trail: Walker Street to City Slough Trail connection	Construction of 2400 ft pedestrian and bicycle path parallel to the existing railroad tracks and within the rail right-of-way. Also includes public outreach and training to improve bicycle and pedestrian safety.	\$2,000
TRL 8-9a	MBSST (Coastal Rail Trail - Segment 8 and 9)	Rail Trail design, environmental clearance and construction along the rail corridor between Pacific Avenue in the City of Santa Cruz to 17th Avenue in Santa Cruz County.	\$34,500

Table C-3b: Santa Cruz County Highway Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CT-P48-CT	Hwy 17 Wildlife Crossing	Construct wildlife undercrossing north of Laurel Road (CT#1G260). 60 foot long single span bridge will extend from the existing Laurel Road Sidehill Viaduct (Br. No. 36-0111) on the west side of Route 17 to the east. The final product will provide a 16 foot wide natural soil bottom wildlife crossing under Route 17 with side slopes to the abutment faces. The wildlife under-crossing will slope downward to the west. A minimum vertical clearance of 10 feet will be provided.	\$5,155
SC-RTC 24f-RTC	2 - Hwy 1: Auxiliary Lanes from 41st Ave to Soquel Ave and Chanticleer Bike/Ped Bridge	Construct auxiliary lanes and a bicycle/pedestrian overcrossing of Hwy 1 at Chanticleer Ave. Caltrans Project ID 05-0C732	\$32,000
SC-RTC 24r-RTC	94 - Hwy 1: Northbound Auxiliary Lane from San Andreas Rd/Larkin Valley Rd to Freedom Blvd	Construct northbound auxiliary lane. [Note: This project was not included as part of Highway 1 CIP project (RTC 24a).]	\$10,000
SC-RTC-24e-RTC	3 - Hwy 1-State Park Dr-Bay/Porter Auxiliary Lanes, Bus on Shoulders, & Mar Vista Bike/Ped Crossing	Construct approximately 2.5 miles of auxiliary lanes northbound and southbound between State Park Dr and Park Ave interchange (1.2 miles) and the Park Ave and Bay/Porter interchange (0.7 miles); hybrid bus-on-shoulder/auxiliary lane facility between Bay Ave/Porter St and State Park Dr (total distance 3 miles). Includes bicycle/pedestrian overcrossing of Hwy 1 at Mar Vista Dr with sidewalk, ADA ramps, and intersection improvements at bridge approaches; reconstruction of Capitola Avenue overcrossing with wider sidewalks and bike lanes; and emergency pullouts and enforcement areas, sound wall, retaining walls	\$90,000
SC-RTC-24g-RTC	4 - Hwy 1 Auxiliary Lanes and Bus on Shoulders: Freedom Blvd to State Park Dr	Construct auxiliary lanes between State Park Dr-Rio Del Mar and Rio Del Mar Blvd - Freedom Blvd interchanges and modify shoulders to allow buses to use shoulders. Includes soundwalls and retaining walls; widening of the bridge over Aptos Creek/Spreckles Drive; Segment 12 of the MBSST (State Park Dr-Rio Del Mar Blvd/Sumner); and reconstruction of two railroad bridges over Highway 1, including bike/ped trail. [Part of Highway 1 CIP project (RTC 24a)].	\$102,000

Table C-3c: Santa Cruz County Highway Operations, Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CT-34-CT	Scotts Creek Coastal Resiliency Project	Replacement of bridge, road fill removal, and associated infrastructure to re-establish marsh/estuarine system currently restricted by Highway 1, benefiting multiple threatened and endangered species and resulting in a more resilient ecosystem and transportation corridor. Anticipated to be funded in-part by environmental resource/water grants. Partnership with Caltrans, CDF&W, RTC, RCD, Coastal Conservancy, and others.	\$3,530
SC-CT-P45-CT	State Highway Preservation (bridge, roadway, roadside)	Various SHOPP projects that address bridge preservation, roadway & roadside preservation and limited mobility improvements. (Constrained=30% of cost to maintain).	\$274,012
SC-CT-P46-CT	Collision Reduction & Emergency Projects	Various SHOPP projects that address collision reduction, mandates (including stormwater mandates) and emergency projects. (Constrained=30% of total cost).	\$291,364
SC-CT-P47-CT	Minors	Various small SHOPP projects (less than \$1 million) that reduce/enhance maintenance efforts by providing minor operational, pavement rehab, drainage, intersection, electrical upgrades, landscape and barrier improvements. (Constrained=30% of total cost).	\$3,500
SC-CT-P49-CT	Hwy 17 Access Management - Operational Improvements	Operational improvements to existing facilities including ramp modifications, accel/decel lanes, turning lanes, driveway consolidation, driveway channelization, etc.	\$10,000
SC-CT-P54-CT	Hwy 9 Viaduct Wall Extension	Construct side hill viaduct extension with cutoff retaining wall, restore roadway and facilities, and install permanent erosion control. (201.131) (Caltrans EA# 1K060 0518000115). Cost (\$1,000): CON/RW \$3,280 /\$60	\$6,910
SC-CT-P55-CT	Hwy 1 Replace Culverts	Safety updates to replace Culverts.	\$13,080
SC-CT-P56-CT	Hwy 1 Soquel Creek Scour Protection	Place Rock Slope Protection (RSP) to protect bridge foundation.	\$7,703

Table C-3c: Santa Cruz County Highway Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CT-P57-CT	Countywide Highway Rumble Strips and Restriping	Install both centerline and edge line rumble strips and restripe with thermoplastic stripe routes 9, 1, 17, 25, 129 and 156 in SCZ and SB counties.	\$4,761
SC-CT-P58-CT	Hwy 17 Jarvis Slide Rock Fence	Construct rock fence / barrier at Jarvis Slide.	\$7,438
SC-CT-P59-CT	Hwy 9 San Lorenzo River Bridge & Kings Creek Bridge Replacement	Near Boulder Creek, at San Lorenzo River Bridge No. 36-0052 (PM 13.61) and Kings Creek Bridge No. 36-0054 (PM 15.49).	\$29,047
SC-CT-P60-CT	Hwy 9 Upper Drainage and Erosion Control Improvements	Replace failed culverts systems and construct energy dissipaters.	\$14,435
SC-CT-P62-CT	Hwy 9 PM 1.0 and 4.0 Viaduct	Construct sidehill viaducts, restore roadway and facilities, provide erosion control.	\$19,962
SC-CT-P66-CT	CZU August Lightning Complex Fire Recovery	Remove fire debris, burned trees, replace guardrail, drainage systems, timber wall lagging, and signs on Routes 1, 9 and 236 at various locations. (EA#1M650)	\$14,800
SC-CT-P68-CT	Hwy 9 Hairpin Tieback at PM 19.97	Construct Soldier Tieback Retaining Wall near Boulder Creek about 1.1 mile south of Junction 236/9.	\$7,630
SC-CT-P70-CT	Hwy 17 Paving	Grind pavement and place Hot Mix Asphalt	\$8,563
SC-CT-P71-CT	Hwy 236 Heartwood Hill Embankment Restoration	(HMA), apply High Friction Surface Treatment (HFST), and contrasting surface treatment	\$4,855
SC-CT-P73-CT	Hwy 17 Drainage Improvements	Construct and install stormwater quality Best Management Practices (BMPs) and rehabilitate drainage systems.(Long Lead Project)	\$9,502
SC-CT-P74-CT	Hwy 1 Capital Maintenance (SR 9 to north of Western Drive)	Preserve pavement and replace 87 ADA ramps as needed.	\$10,400
SC-CT-P76-CT	Hwy 9 Capital Maintenance (CapM)	(south of Mt Hermon Road to 0.6 mile north of Glenwood Drive).	\$26,400
SC-CT-P77-CT	Hwy 9 Capital Maintenance North	Preserve pavement, reconstruct guardrail, rehabilitate 6 drainage systems. (Saratoga Toll Rd in Boulder Creek to SR 35/county line)	\$9,200
SC-CT-P78-CT	Hwy 17 Capital Maintenance (SR 1 to Vine Hill School Road area)	Preserve pavement, upgrade median barrier, install 12 TMS	\$17,200
SC-CT-P79-CT	Hwy 129 Capital Maintenance	Preserve pavement, rehabilitate 6 drainage systems. (Salsipuedes Creek to Old Chittenden Road)	\$12,500

Table C-3c: Santa Cruz County Highway Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-RTC-24j-RTC	7 - Hwy 1: Reconstruct Bay Ave/Porter St and 41st Avenue Interchange	Reconstruct highway to operate as a single interchange. Includes construction of a frontage road that includes bike lanes and sidewalks connecting the Bay/Porter and 41st Ave intersections; reconstruction of the Bay/Porter undercrossing and the 41st Avenue overcrossing with enhanced pedestrian and bicycle treatments on both sides, and reconfiguration of ramps and local streets to accommodate local traffic and ramp metering. [Part of the Highway 1 CIP project (RTC 24a), but is listed here as a standalone project.]	\$14,000
SC-SC-38-SCR	Hwy 1/San Lorenzo Bridge Replacement	Replace the Highway 1 bridge over San Lorenzo River to increase capacity, improve safety and improve seismic stability, from Highway 17 to the Junction of 1/9. Reduce flooding potential and improve fish passage. Caltrans Project ID 05-0P460	\$20,000
SC-SC-P81-SCR	Hwy 1/Mission Street at Chestnut/King/Union Intersection Modification	Modify design of existing intersections to add lanes and upgrade the traffic signal operations to add capacity, reduce delay and improve safety. Provide access ramps and bike lanes on King and Mission. Includes traffic signal coordination.	\$4,650

Table C-3d: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
CAP 11SC	Clares Street Traffic Calming and Pavement Preservation	Implementation of traffic calming measures. Includes elevated crosswalks with rapid-rectangular flashing beacons (RRFB) to improve pedestrian visibility, ADA curb ramps, narrowed vehicle lanes, buffered bike lanes, and full pavement rehabilitation and restriping of the entire road , including the intersection at 41st Ave/Clares Street.	\$1,350
CAP 16SC	Bay Avenue/Capitola Avenue Intersection Modifications/Roundabout	Multimodal improvements to intersection. Roundabout.	\$500
CAP 20SC	41st Ave/Capitola Avenue Intersection Reconstruction	Reconstruct intersection and reconfigure signal phasing. Vehicular, pedestrian and bicycle lane markings at intersections will be updated to meet the latest complete streets guidelines. Where necessary all pedestrian ramps will be modified to meet current ADA requirements	\$415
CAP 22SC	41st Ave Rehabilitation (Cory St to Clares St)	Reconstruct pavement on 41st Ave, enhance bike facilities with possible buffered bike lanes	\$1,000
CO 66SC	East Cliff Drive Cape Seal (12th-17th)	Pavement maintenance, isolated section digout and asphalt replacement and cape seal on entire roadway.	\$230
CO 82 SC	Branciforte Drive Chip Seal Project (Granite Creek Road to SC city limits - 1.91mi)	Roadway rehabilitation: Digouts, Rubberized Chip Seal, and restriping of a portion of Branciforte Drive	\$433
CO 90SC	Emergency Routes Resurfacing: Alba & Jamison Creek Roads	Pavement maintenance of approximately 7.08 miles of roadway including all of Alba Rd and Jamison Creek Rd. Isolated sections of digout and asphalt replacement where rutting has occurred & isolated asphalt leveling courses, followed by resurfacing of the entire roadway, restriping. Covers existing roadway edge to existing roadway edge.	\$2,084
CO 91SC	San Andreas Road Resurfacing	Pavement maintenance of approximately 3.01 miles of San Andreas Rd, from 365' S/O Manresa State Beach to Sunset Beach Rd. Isolated sections of digout and asphalt replacement where rutting has occurred, followed by resurfacing of the entire roadway surface and restriping. Work extends from existing roadway edge to existing roadway edge and includes repaving/restriping existing bike lanes	\$1,863

Table C-3d: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
CO 92SC	Soquel San Jose Rd/ Porter St - Road Resurfacing & Multimodal Improvement	Pavement maintenance of approximately 3.15 miles of Soquel San Jose Road and 0.18 miles of Porter Street, forming a continuous section from Soquel Drive to Laurel Glen Rd. Isolated sections of digout and asphalt replacement where rutting has occurred, followed by resurfacing of the entire roadway surface and restriping. Work extends from existing roadway edge to existing roadway edge and includes repaving/restriping existing bike lanes. Includes multimodal improvements in Soquel Village, possibly green lanes, ped crossing enhancements, etc	\$1,643
CO 93SC	Holohan Road Resurfacing	Pavement maintenance of approximately 1.42 miles of Holohan Rd, from Green Valley Rd to 420' W/O State Hwy 152 (the project limit of the planned Holohan/152 intersection improvements). Isolated sections of digout and asphalt replacement where rutting has occurred, followed by resurfacing of the entire roadway surface and restriping. Work extends from existing roadway edge to existing roadway edge and includes repaving/restriping existing bike lanes	\$490
CO-P28i	Varni Road Improvements (Corralitos Road to Amesti Road)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road	\$340
SC 42SC	Soquel Avenue at Frederick Street Intersection Modifications	Widen to improve eastbound through-lane transition on Soquel Ave and lengthen right-turn pocket and bicycle lane on Frederick St. Upgrade access ramps.	\$900
SC-CAP 19-CAP	Capitola Street Pavement Management	System preservation. Streets identified include 41st Avenue, Clares Street, Bay Avenue, Capitola Road and numerous residential streets including but not limited to 42nd, 47th, 48th, Fanmar, Diamond, and Ruby Court.	\$1,450
SC-CAP-P06-CAP	Citywide General Maintenance and Operations	Ongoing maintenance, repair and operation of road/street system within the City limits.	\$66,300
SC-CAP-P07-CAP	Bay Avenue/Hill Street Intersection	Intersection improvements to improve traffic flow. Roundabout.	\$210

Table C-3d: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CAP-P07p-CAP	Stockton Avenue Bridge Rehab	Replace bridge with wider facility that includes standard bike lanes and sidewalks.	\$1,500
SC-CAP-P09-CAP	Park Avenue/Kennedy Drive Improvements	Construct intersection improvements, especially for bikes/peds. May include traffic signal.	\$360
SC-CAP-P27-CAP	Wheelchair Access Ramps	Install wheelchair access/curb cut ramps on sidewalks citywide.	\$200
SC-CAP-P28-CAP	Monterey Avenue at Depot Hill	Improve vehicle ingress and egress to Depot Hill along Escalona Avenue and improve pedestrian facilities.	\$260
SC-CAP-P30-CAP	47th Avenue Traffic Calming and Greenway	Traffic calming and traffic dispersion improvements along 47th Avenue from Capitola Road to Portola Drive and implementation of greenway, which gives priority to bicycles and pedestrians on low volume, low speed streets including, pedestrian facilities, way finding and pavement markings, bicycle treatments to connect to MBSST.	\$100
SC-CAP-P32-CAP	Bay Avenue/Monterey Avenue Intersection Modification	Multimodal improvements to the intersection. Include signalization or roundabout along with pedestrian, bicycle treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) and transit access.	\$310
SC-CAP-P34-CAP	Capitola Village Enhancements: Capitola Ave	Multimodal enhancements along Capitola Avenue.	\$350
SC-CAP-P38-CAP	40th Avenue/Clares Street Intersection Improvements	Widen intersection and signalize.	\$500
SC-CAP-P40-CAP	46th/47th Avenue (Clares to Cliff Drive) Bike Lanes/Traffic Calming	46th/47th Avenue from Clares to Portola/Cliff Drive- Add traffic calming and wayfinding signage to connect to Brommer and MBSST.	\$20
SC-CAP-P41-CAP	Brommer/Jade/Topaz Street Bike Lanes/Traffic Calming (Western City Limit on Brommer to 47th Ave.)	Add buffered bike lanes, traffic calming and wayfinding signage and bike/ped priority crossing at 41st Avenue, connecting the two N/S neighborhood greenways.	\$20
SC-CAP-P55-CAP	Porter Street and Highway 1 I/S Improvements	Add additional dedicated right turn lane on Porter Street to northbound on ramp.	\$250
SC-CO-P02-USC	Airport Boulevard Improvements (City limits to Green Valley Road)	Major rehab, addition of bike lanes, transit facilities, merge lanes, intersection improvements, sidewalks, drainage and landscaping.	\$1,240

Table C-3d: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-P03-USC	Amesti Road Multimodal Improvements (Green Valley to Brown Valley Road)	Roadway rehab and reconstruction, left turn pockets at Green Valley Road, Pioneer Road/Varni Road. Add bike lanes, transit turnouts, sidewalks, merge lanes, landscaping and intersection improvements.	\$600
SC-CO-P04-USC	Bear Creek Road Improvements (Hwy 9 to Hwy 35)	Major rehab, add bike lanes, turnouts, merge lanes and intersection improvements. Some landscaping and drainage improvements also.	\$250
SC-CO-P08-USC	Corralitos Road Rehab and Improvements (Freedom Boulevard to Hames Road)	Major rehab, transit, bike and ped facilities. May also include drainage, merge lanes, landscaping and intersection improvements.	\$620
SC-CO-P09-USC	East Cliff Drive Improvements (32nd Avenue to Harbor)	Roadway rehab, add left turn pockets at 26th and 30th Avenue, fill gaps in bikeways and sidewalks, add transit turnouts, intersection improvements. Some landscaping and drainage improvements.	\$1,500
SC-CO-P10-USC	Empire Grade Improvements	Road rehab and maintenance, left turn pocket at Felton Empire Road, add bike lanes, transit facilities, some sidewalks, landscaping. Drainage improvements, merge lanes and intersection improvements may also be needed.	\$1,190
SC-CO-P11-USC	Freedom Blvd Multimodal Improvements (Bonita Dr to City of Watsonville)	Add bike lanes, sidewalks on some segments, transit turnouts, signalization. Left turn pockets at Bowker, Day Valley, White Rd, and Corralitos Rd. Also includes merge lanes, intersection improvements, landscaping, major rehabilitation and maintenance, drainage improvements.	\$775
SC-CO-P12-USC	Graham Hill Road Multimodal Improvements (City of SC to Hwy 9)	Bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes, traffic signals. Major rehabilitation and maintenance. Drainage improvements. Signal upgrade at SR 9.	\$1,755
SC-CO-P13-USC	Green Valley Road Improvements	Add two-way left turn lanes from Mesa Verde to Pinto Lake on Green Valley Road. Also includes some road rehab and maintenance, bike lanes, sidewalks, transit facilities, landscaping and merge lanes.	\$1,030
SC-CO-P14-USC	La Madrona Drive Improvements (El Rancho Drive to City of Scotts Valley)	Bike lanes, sidewalks, transit turnouts, left turn pockets at Sims Road, Highway 17 and El Rancho Road, merge lanes, and intersection improvements. Also includes major rehabilitation, drainage and maintenance.	\$905
SC-CO-P17-USC	Sims Road Improvements (Graham Hill Road to La Madrona Drive)	Road rehab and maintenance, drainage, intersection improvements, landscaping. Add bike, ped and transit facilities.	\$440

Table C-3d: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-P18-USC	Soquel Avenue Improvements (City of SC to Gross Road)	Transit turnouts, two way left turn lanes from Chanticleer to Mattison, merge lanes, signalization and intersection improvements. Signals at Chanticleer and Gross Road. Roadwork: major rehabilitation and maintenance, perhaps drainage improvements. Roadside: sidewalks, landscaping, and new transit facilities.	\$3,310
SC-CO-P20-USC	State Park Drive Improvements Phase 2	Transit turnouts, two way left turn, merge lanes, intersection improvements, and fill gaps in bike and ped facilities including pedestrian crossing improvements, bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals). Plus, major rehabilitation and maintenance, drainage improvements, landscaping.	\$335
SC-CO-P22-USC	Paul Sweet Road Improvements (Soquel Dr to end)	Major road rehab and maintenance. Also adds bike lanes, sidewalks, landscaping. Drainage improvements, merge lanes and intersection improvements, and new transit facilities may also be needed.	\$310
SC-CO-P24-USC	Lockwood Lane Improvements (Graham Hill Road to SV limits)	Major road rehab, add bicycle lanes, sidewalks, some transit facilities, landscaping and intersection improvements.	\$243
SC-CO-P26a-USC	41st Avenue Improvements Phase 2 (Hwy 1 Interchange to Soquel Drive)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$340
SC-CO-P26b-USC	Beach Road Improvements (City limits to Pajaro Dunes)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$340
SC-CO-P26d-USC	Brown Valley Road Improvements (Corralitos Road to Redwood Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$340
SC-CO-P26e-USC	Buena Vista Road Improvements (San Andreas to Freedom Boulevard)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$825
SC-CO-P26g-USC	Cassery Road Improvements (Hwy 152 to Green Valley Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$208
SC-CO-P26h-USC	Center Avenue/Seacliff Drive Improvements (Broadway to Aptos Beach Drive)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$340
SC-CO-P26i-USC	Chanticleer Avenue Improvements (Hwy 1 to Soquel Drive)	Roadway and roadside improvements including bike lanes, sidewalks, drainage and intersection improvements.	\$340

Table C-3d: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-P26j-USC	East Zayante Road Improvements (Lompico Road to just before Summit Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$485
SC-CO-P26k-USC	El Rancho Drive Improvements (Mt. Hermon/Hwy 17 to SC city limits)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$655
SC-CO-P26l-USC	Eureka Canyon Road Improvements (Hames Road to Buzzard Lagoon Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$655
SC-CO-P26m-USC	Glen Canyon Road Improvements (Branciforte Drive to City of Scotts Valley)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$1,640
SC-CO-P26n-USC	Glenwood Drive Improvements (Scotts Valley city limits to State Hwy 17)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$825
SC-CO-P26p-USC	Mattison Lane Improvements (Chanticleer Avenue to Soquel Avenue)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$400
SC-CO-P26q-USC	Mt. Hermon Road Improvements (Lockhart Gulch to Graham Hill Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$825
SC-CO-P26r-USC	Porter Street Improvements (Soquel Drive to Paper Mill Road)	Roadway and roadside improvements including buffered sidewalks and bicycle treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) to address speed inconsistency between bicyclists and vehicles, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$340
SC-CO-P26s-USC	Seascape Boulevard Improvements (Sumner Avenue to San Andreas Road)	Roadway improvements and pavement rehabilitation.	\$170
SC-CO-P26u-USC	Summit Road Improvements	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$1,530

Table C-3d: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-P27a-USC	37th/38th Avenue (Brommer to East Cliff) Multimodal Circulation Improvements and Greenway	Evaluate and if feasible improve vehicle and transit access on 38th Avenue from East Cliff to Brommer and develop greenway on 37th Avenue from East Cliff to Portola. Roadway improvements may include roadway and roadside improvements including sidewalks, bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals), transit turnouts, left turn pockets and intersection improvement.	\$570
SC-CO-P27c-USC	Corcoran Avenue Improvements (Alice Street to Felt Street)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	\$150
SC-CO-P27e-USC	Main Street Improvements (Porter Street to Cherryvale Avenue)	Roadway and roadside improvements on Major Collector including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	\$1,760
SC-CO-P27f-USC	Mill Street Improvements (entire length)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	\$360
SC-CO-P27h-USC	Paulsen Road Improvements (Green Valley Road to Whiting Road)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	\$240
SC-CO-P27i-USC	Pinehurst Dr Improvements (entire length)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	\$180
SC-CO-P27k-USC	Spreckels Drive Improvements (Soquel Drive to Aptos Beach Drive)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	\$340
SC-CO-P27l-USC	Winkle Avenue Improvements (entire length from Soquel Drive)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	\$655
SC-CO-P28a-USC	Bean Creek Road Improvements (Scotts Valley City Limits to Glenwood Drive)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$485
SC-CO-P28c-USC	Commercial Way Improvements (Mission Drive to Soquel Drive)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$170

Table C-3d: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-P28d-USC	Felton Empire Road Improvements (entire length to State Hwy 9)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$655
SC-CO-P28f-USC	Pine Flat Road Improvements (Bonny Doon Road to Empire Grade Road)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$655
SC-CO-P28g-USC	Soquel-Wharf Road Improvements (Robertson Street to Porter Street)	Roadway and roadside improvements on various Minor Arterials including addition of bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals), transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$515
SC-CO-P28h-USC	Thurber Lane Improvements (entire length)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$485
SC-CO-P29e-USC	Maciel Avenue Improvements (Capitola Road to Mattison Lane)	Improvements of roadways and roadsides on various Minor Collectors including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$400
SC-CO-P29f-USC	Paul Minnie Avenue Improvements (Rodriguez Street to Soquel Avenue)	Improvements of roadways and roadsides on various Minor Collectors including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$340
SC-CO-P30d-USC	Cabrillo College Drive Improvements (Park Avenue to Twin Lakes Church)	Improvements of roadways and roadsides on various Major Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road and roadsides.	\$240
SC-CO-P30n-USC	Rio Del Mar Boulevard Improvements (Esplanade to Soquel Drive)	Improvements of roadways and roadsides on various Major Arterials including addition of bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road and roadsides.	\$725
SC-CO-P31g-USC	Opal Cliff Drive Improvements (41st Avenue to Captiola City Limits)	Roadway, roadside and intersection improvements including sidewalks, bike treatments (such as buffered and/or painted bike lanes), designed to accommodate the number of users and link to East Cliff Drive.	\$290

Table C-3d: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-P33d-USC	Harper St Improvements (entire length-El Dorado Ave to ECM)	Roadway and roadside improvements on various Minor Collectors including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$310
SC-CO-P35-USC	Countywide General Road Maintenance and Operations	Ongoing maintenance, repair, and operation of road/street system within the unincorporated areas of the county.	\$461,200
SC-CO-P36-USC	Soquel-San Jose Road Improvements (Paper Mill Road to Summit Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$580
SC-CO-P37-USC	Countywide ADA Access Ramps	Construction of handicapped access ramps countywide.	\$620
SC-CO-P62-USC	Soquel Dr Road Improvements (Robertson St to Daubenbiss)	Roadway and roadside improvements including curb, gutter, sidewalk, bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals), left turn lanes, intersection improvements and roadway rehabilitation.	\$410
SC-CO-P83-USC	San Lorenzo Way Bridge Replacement Project	The project will consist of completely replacing the existing one lane structure and roadway approaches with a two lane clear span bridge and standard bridge approaches.	\$3,190
SC-CO-P85-USC	Green Valley Rd Bridge Replacement Project	The project will consist of completely replacing the existing two lane structure and roadway approaches with a two lane clear span concrete slab bridge and standard bridge approaches.	\$2,110
SC-CO-P88-USC	Either Way Ln Bridge Replacement Project	The project will consist of completely replacing the existing narrow one lane structure and roadway approaches with a two lane clear span precast voided concrete slab bridge and standard bridge approaches.	\$2,180
SC-CO-P90-USC	Fern Dr @ San Lorenzo River Bridge Replacement Project	The project will consist of completely replacing the existing three span single lane structure and roadway approaches with a new two lane clear span reinforced concrete box girder bridge and standard bridge approaches.	\$2,830
SC-CO-P91-USC	Larkspur Bridge @ San Lorenzo River	The project will consist of completely replacing the existing narrow one lane structure and roadway approaches with a two lane bridge and standard bridge approaches.	\$3,930

Table C-3d: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-P97-USC	County wide guardrail	Install guardrail on County roads.	\$15,000
SC-SC-37-SCR	Murray Street Bridge Retrofit	Seismic retrofit of existing Murray St. bridge (36C0108) over Woods Lagoon at harbor and associated approach roadway improvements and replacement of barrier rail. Includes wider bike lanes and sidewalk on ocean side. Include access paths to harbor if eligible.	\$11,440
SC-SC-48-SCR	Ocean Street Pavement Rehabilitation	Pavement rehabilitation using cold-in-place recycling process; includes new curb ramps, restriping of bicycle lanes and crosswalks.	\$600
SC-SC-52-SCR	Chestnut Street St Storm Drain and Paving Rehab and Safety Improvement	Rehab pavement, install bike/ped improvements including new curb ramps and crossings from Laurel Street to Green St. Other funds being used to replace the storm drain system.	\$2,165
SC-SC-P07-SCR	Citywide Operations and Maintenance	Ongoing maintenance, repair, and operation of street system within the City limits. (Const=\$3.0M/yr; Unconst=\$4.2M/yr)	\$109,000
SC-SC-P100-SCR	Seabright/Murray Traffic Signal Modifications	Remove split phasing on Seabright and add right-turn lane northbound.	\$1,030
SC-SC-P101-SCR	Swift/Delaware Intersection Roundabout or Traffic Signal	Install Traffic Signal or Roundabout at Intersection to improve capacity and safety.	\$500
SC-SC-P104-SCR	Measure H Road Projects	Road rehabilitation and reconstruction projects citywide to address backlog of needs using Measure H sales tax revenues. (Some Measure H funds anticipated to fund specific projects listed in the RTP).	\$41,800
SC-SC-P109-SCR	Bay/High Intersection Modification	Install a roundabout or modify the traffic signal to include protected left-turns and new turn lanes. Revise sidewalks, access ramps and bike lanes as appropriate.	\$2,150
SC-SC-P128-SCR	Citywide Street Sweeping	Ongoing street sweeping, funded from City Refuse Enterprise Fund.	\$22,500
SC-SC-P129-SCR	Downtown Intersection Improvements	Modify Front/Soquel, Front/Laurel and Pacific/Front Intersections stemming from additional residential and commercial development in the Downtown.	\$300
SC-SC-P130-SCR	Mission Street Improvement Plan	Evaluate and design Mission intersection improvements at Chestnut-King, Laurel, Bay, Fair, and Swift based on the General Plan.	\$1,500
SC-SC-P13-SCR	Riverside Avenue/Second Street Intersection Modification.	Modify intersection to reduce congestion and improve pedestrian crossing.	\$175

Table C-3d: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-SC-P77-SCR	Bay Street Corridor Modifications	Intersection modifications on Bay Street Corridor from Mission Street to Escalona Drive, including widening at the Mission Street northeast corner and widening on Bay. Improve bike lanes and add sidewalks to west side of Bay.	\$970
SC-SC-P83-SCR	West Cliff/Bay Street Modifications	Install smini-roundabout to replace the all-way stop to improve safety and capacity.	\$500
SC-SC-P86-SCR	Ocean Street Streetscape and Intersection, Plymouth to Water	Implement this phase of the Ocean Street plan and modify Plymouth Street to provide separate turn lanes and through lanes, widen sidewalks, pedestrian islands/bulbouts, transit improvements, street trees, street lighting and medians landscaping improvements. This includes pedestrian and bicycle crossing improvements and detection and connectivity to the pedestrian and bicycle path on the San Lorenzo River and adjacent neighborhoods. Include Gateway treatment.	\$2,000
SC-SC-P90-SCR	High Street/Moore Street Intersection Modification	Add a protected left turn to existing signalized intersection along High Street at city arterial. Project is located in high pedestrian and bicycle use activity area.	\$100
SC-SC-P91-SCR	Shaffer Road Widening and Railroad Crossing	Construction of a new crossing of the Railroad line at Shaffer Road and widening at the southern leg of Shaffer in conjunction with development. Complete sidewalks and bike lanes.	\$1,000
SC-SC-P93-SCR	Beach/Cliff Intersection Signalization	Signalize intersection for pedestrian and train safety.	\$210
SC-SC-P96-SCR	Bay/California Traffic Signals	Install traffic signals and roundabouts for safety and capacity improvements.	\$1,100
SC-SV-P06-SCV	Citywide Access Ramps	Place handicap ramps at various locations. Avg annual cost: \$8K/yr.	\$210
SC-SV-P27-SCV	Citywide General Maintenance and Operations	Ongoing maintenance, repairs and operation of road/street system within the City limits. (\$400K/yr const; \$250/yr unconst).	\$23,000
SC-SV-P28-SCV	Neighborhood Traffic Calming	Citywide traffic calming devices.	\$770
SC-SV-P47-SCV	Mt Hermon/Scotts Valley Drive - Transit Queue Jump	Evaluate and if found to be beneficial, remove right turn islands at Mt Hermon Road/Scotts Valley Drive to add transit queue jump lanes/signals.	\$620
SC-SV-P51-SCV	Mt. Hermon Road/Town Center Entrance Traffic Signal	Install new traffic signal at the intersection of the future Town Center road that will accommodate increased pedestrian travel. Add a right-turn lane on the westbound approach. New signalization of the intersection at the future Town Center's primary access point on Mt. Hermon Road would provide protected pedestrian crossing, ADA accessible curb ramps and detectable surfaces on all intersection corners. Permitted left-turn phasing shall be used for the northbound and southbound approaches, while protected left-turn phasing shall be provided on the eastbound and westbound Mt. Hermon Road approaches.	\$130

Table C-3d: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-SV-P52-SCV	Kings Village Road/Town Center Entrance Traffic Signal	Install new traffic signal at the intersection of Kings Village Road and new Town Center entrance (near transit center) with protected pedestrian crossings and transit signal priority. New Signalization of the intersection on Kings Village Road at the transit center exit and future Plan street connection would provide a location for protected pedestrian crossings, and would allow transit operators to easily exit the transit center and maintain operating schedules.	\$105
SC-SV-P73-SC	Granite Creek Rd Overcrossing Repaving and Bike/Ped Upgrades	Repaving of asphalt surface and restriping on Granite Creek Rd from Scotts Valley Dr to the intersection at Santas Village Rd and SV Dr/Santas Village Rd intersection. Widening bike lanes-narrowing travel lanes, adding green treatment to bike lanes, adding a bike box. Adds retaining wall to shore up sloughing under sidewalks. Repaving of AC sidewalks to meet ADA grades. Addition of truncated domes where they are missing at the two intersections.	\$609
SC-UC-P01-UC	UCSC Main Entrance Improvements	Realign roadway, transit pullout/shelter, relocate bike parking, construct pedestrian path, historic resource analysis. Work may be done in conjunction with City Roundabout project.	\$2,070
SC-UC-P59-UC	UCSC Lump Sum Roadway Maintenance	Repaving and rehabilitation of roadways on UCSC campus to maintain existing network.	\$2,275
SC-UC-P66-UC	Transportation-Related Stormwater Management Projects	Retrofitting existing transportation facilities and developing new facilities with new stormwater management techniques.	\$1,030
SC-VAR-P13-VAR	Lump Sum Emergency Response Local Roads	Lump sum for repair of local roads damaged in emergency. (Based on average ER/FEMA/CalEMA funds, storm damage, fire, etc. Costs of repairs assumed under lump sum maintenance and operations within local jurisdiction listings.)	\$240,000
SC-VAR-P14-VAR	Lump Sum Bridge Preservation	Painting, Barrier Rail Replacement, Low Water Crossing, Rehab, and Replacement bridges for SHOPP and Highway Bridge Program (HBP).	\$100,000
SC-WAT-45-WAT	Freedom Blvd Reconstruction (Alta Vista to Green Valley)	Remove and replace non-ADA compliant driveways and curb ramps, install high visibility crosswalks, provide sharrows and bicycle signage, upgrade existing bus stop shelter, install new traffic signal at Sydney Ave with pedestrian signal heads, pedestrian actuated traffic signals, audible countdown, pedestrian-level lighting and illumination at crosswalks and reconstruct roadway.	\$2,000

Table C-3d: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-WAT-46-WAT	Watsonville Road Maintenance (Various Locations)	Place three-layer coating system on road surface	\$2,505
SC-WAT-O1A-WAT	Hwy 1/Harkins Slough Road Interchange: Bicycle/Pedestrian Bridge	Construction of Pedestrian/Bicycle Bridge over Highway 1. Caltrans Project ID 05-1G490	\$15,800
SC-WAT-P06-WAT	Citywide General Maintenance and Operations	Ongoing maintenance, repair, and operation of road/street system, including bicycle and pedestrian facilities.(Total Need = \$2,600/year, constr=\$1500/yr)	\$69,270
SC-WAT-P13-WAT	Neighborhood Traffic Plan Implementation	Address concerns about traffic complaints through Education, Enforcement, and Engineering solutions. Install traffic calming devices that do not impede bicyclist access (\$20k/yr).	\$600
SC-WAT-P24-WAT	Citywide Transportation Projects	Lump sum of transportation projects to be identified in the future. Including major rehabilitation and operational improvements (\$1.2M/yr).	\$5,000
SC-WAT-P35-WAT	Bridge Maintenance	Maintenance of bridges.	\$150
SC-WAT-P45-WAT	Green Valley Rd Improvement (Freedom Blvd to City Limit)	Reconstruct existing roadway, install a median island to encourage safer turning movements, remove and replace existing driveways and curb ramps that do not comply with existing accessibility standards, restripe roadway to provide striping for bike lanes where none exist.	\$2,500
SC-WAT-P47-WAT	Main Street Modifications (City Limit to Lake Avenue)	Repave roadway and bike lanes; repair, replace and install curb, gutter, sidewalk and curb ramps: replace and upgrade signage and striping. Evaluate and if feasible, provide bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) and buffered sidewalks.	\$2,100
SC-WAT-P72-WAT	Freedom Boulevard (Green Valley Road to Airport Blvd)	Repair and resurface damaged roadway and bike lanes, replace damaged sidewalks, add pedestrian facilities where none exist.	\$3,300
SC-WAT-P77-WAT	Elm St. Improvements Project	Road reconstruction and sidewalk improvements	\$350
SC-WAT-P79-WAT	Harkins Slough Rd Pedestrian & Bicycle Bridge	Install pedestrian & bicycle bridge, pedestrian path, sidewalk, striping and signage	\$90
SC-WAT-P86-WAT	Main Street Traffic Study	Conduct traffic study on Main Street between Freedom Blvd and Riverside Dr to determine the feasibility of a lane reduction/road diet. Determine possible impacts on adjacent streets and any necessary improvements. Study shall be coordinated with 2019 Downtown Watsonville Complete Streets and 2020 Downtown Specific Plan.	\$25
SC-WAT-P89-WAT	West Beach St/Ohlone Pkwy Signal	Install traffic signal	\$130

Table C-3e: Santa Cruz County Other Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$,000s)
CO 36SC	State Park Drive/Seacliff Village Improvements	Construct sidewalks, bike lanes, bus turnouts, central plaza, street lighting, EV charging station, parking, landscaping, drainage and roadway overlay in Seacliff core area- consistent with the Seacliff Village Plan adopted by the BOS in 2003.	\$3,096
RTC 04SC	Planning, Programming & Monitoring (PPM) - SB 45	Development and amendments to state and federally mandated planning and programming documents, monitoring of programmed projects. Avg annual cost: \$250k/yr.	\$5,000
SC-AIR-P01-WAT	Lump Sum Watsonville Airport Capital Projects	Projects from the Watsonville Airport Capital Improvement Program. Includes new hangers, reconstruction of aviation apron, security feature and runway extensions.	\$27,000
SC-AIR-P02-WAT	Watsonville Municipal Airport Operations	Ongoing operations/maintenance. Average \$2M/year.	\$49,925
SC-CAP-P53-CAP	Capitola Road & 45th Avenue I/S Improvements	Signalization or other LOS improvements.	\$400
SC-CAP-P54-CAP	Wharf Road and Stockton Avenue I/S Improvements	Signalization or other LOS improvements.	\$350
SC-CAP-P57-CAP	Stockton Avenue and Capitola Avenue I/S Improvements	Signalization or other LOS improvements.	\$500
SC-CO-P96-USC	Capital improvement projects consistent with the Sustainable Santa Cruz County Plan	Construct associated multi-modal infrastructure improvements associated with the Sustainable Santa Cruz County Plan	\$7,000
SC-CO-P106-USC	Pajaro River Flood Risk Management Project	Rebuild Pajaro River Levees to mitigate flood danger. Includes rebuilding Highway 129 and 152 bridges at Salsipuedes Creek and Corralitos Creek and other transportation facilities within the project envelope. [Total flood control project estimated to cost \$400M and primarily funded by State and Federal water and U.S. Army Corps of Engineers grants, which are not part of the RTP Financial Element]	\$1
SC-CT-P09e-CT	Hwy 9 SLV Corridor Projects	May be implemented by Caltrans or County of SC, in partnership with others. Implementation of priorities identified in the Complete Streets Corridor Plan. Includes improvements to increase safety and discourage speeding, updated and expanded bicycle and pedestrian facilities including shoulder widening, auto turn lanes and other auto circulation improvements, and transit improvements in SLV. SLV Complete Streets PID development efforts underway; some may be integrated into SHOPP projects. Capital Cost Est. TBD - preliminary estimate \$100-150 million. \$10M Measure D. Some bike/ped elements also shown in CO-P46a/b.	\$30,000

Table C-3e: Santa Cruz County Other Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CT-P50-CT	Hwy 17 Access Management - Multimodal Improvements	Multimodal improvements including park and ride improvements and facilities serving separated bike/ped crossing or express transit route.	\$5,000
SC-CT-P67-CT	Hwy 236 Hazardous Tree Removal	Remove hazardous trees and fire debris near Boulder Creek, from Forest Drive to 2.2 miles south of Route 9. (EA#1M790)	\$15,625
SC-CT-P75-CT	Hwy 1 Long Toed Salamander Mitigation	Long Toed Salamander mitigation partnering (Main St interchange in Watsonville to north of Larkin Valley Rd interchange)	\$2,800
SC-RTC 03a-RTC	Rail Line Repairs and Bridge Rehabilitation	Infrastructure preservation for current uses and future transportation purposes. Includes railroad bridge rehabilitation and 2017 storm damage repairs.	\$5,800
SC-RTC 03b-RTC	Rail Line: Track Infrastructure, Signage, Maintenance and Repairs	Ongoing operating, maintenance, repair, rehabilitation, and oversight of railroad track infrastructure and signage (~\$175k/year).	\$4,375
SC-RTC 03d-RTC	Railroad Bridge Inspections & Analysis	Railroad Bridges are required to be inspected and load rated every 540 days per Federal Railroad Administration (FRA) requirements	\$6,250
SC-RTC-P07-RTC	SCCRTC Administration (TDA)	SCCRTC as Regional Transportation Planning Agency for Santa Cruz County distributes Transportation Development Act Local Transportation Funds and State Assistance Funds for planning, transit, bicycle facilities and programs, pedestrian facilities and programs and specialized transportation in accordance with state law and the unmet transit needs process. Average annual cost: \$650K/yr.	\$16,250
SC-RTC-P08-RTC	SCCRTC Planning	SCCRTC Planning Tasks. Includes public outreach, long and short range planning, interagency coordination. Avg annual cost: \$625k/yr.	\$15,625
SC-RTC-P25-VAR	Transit Oriented Development Grant Program	Smart growth grant program to fund TODs that encourage land use and transportation system coordination. May include joint child care/PNR/transit centers.	\$2,570
SC-RTC-P50-RTC	Countywide Bicycle, Pedestrian and Vehicle Occupancy Counts	Conduct counts to assess mode split over time and assess impact of new facilities.	\$330
SC-RTC-P51-RTC	Performance Monitoring	Transportation data collection and compilation to monitor performance of transportation system to advance goals/targets. Includes travel surveys of commuters, Transportation Demand Management plan, a low-stress bicycle network plan and parking standards plan.	\$220

Table C-3e: Santa Cruz County Other Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-RTC-P59-RTC	Measure D Administration and Implementation	SCCRTC administration, implementation and oversight of Measure D and the revenues generated from the 2016 Santa Cruz County Transportation Sales Tax - Measure D. Costs include annual independent fiscal audits, reports to the public, preparation and implementation of state-mandated reports, oversight committee, preparation of implementation, funding and financing plans, and other responsibilities as may be necessary to administer, implement and oversee the Ordinance and the Expenditure Plan.	\$14,375
SC-RTC-P61-RTC	Santa Cruz Branch Rail Line Trestle Reconstruction and San Vicente Restoration	Reconstruct the Santa Cruz Branch Rail Line and North Coast Rail Trail at San Vicente Creek mouth to address coastal resiliency and to reestablish the San Vicente Creek watershed currently restricted by the Santa Cruz Branch Rail Line embankment	\$3,500
SC-VAR-P09s-VAR	R SLV Schools Complex Circulation and Access Study	Gather data, preliminary engineering, traffic analysis, and feasibility and needs assessment for Hwy 9 in Felton and within the SLV Schools Complex (SLV High, Middle, and Elementary Schools). Includes bicycle and walking facilities providing access to SLV Schools Complex from Felton neighborhoods and Glen Arbor Rd.	\$250
SC-VAR-P07-VAR	Transportation System Electrification	Partnership with local gov't agencies, electric vehicle manufactures, businesses, and Ecology Action to establish electric vehicle charging stations for EV's, plug-in hybrids, NEV's, as well as ebikes and escooters. Work with manufacturers on developing advanced electric vehicles and educating the public regarding the ease of use and benefits of electric vehicles.	\$51,650
SC-VAR-P25-VAR	Planning for Transit Oriented Development for Seniors	Evaluate opportunities for Transit Oriented Development serving seniors including access to medical facilities.	\$80
SC-VAR-P30-VAR	Public/Private Partnership Transit Stops and Pull Outs Plan	Develop model for assisting local jurisdictions in working with businesses to install transit pullouts and shelters on property in areas identified as high quality transit corridors in Sustainable Communities Strategy.	\$150
SC-VAR-P36-VAR	Safety Plan	Develop a safety plan that addresses traffic related injuries and fatalities for all modes of transportation.	\$310
SC-VAR-P38-VAR	Environmental Mitigation Program	Allocate funds to protect, preserve, and restore native habitat that construction of transportation projects listed in SCCRTC's RTP could potentially impact. EMP funds will be for uses such as, but not limited to, purchasing land prior to project development to bank for future mitigation needs, funding habitat improvements in advance of project development to leverage and enhance investments by partner agencies.	\$5,680

Table C-3f: Santa Cruz County Transportation Demand Management Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-VAR-P50-VAR	Climate Adaptation, Resiliency, and Hazard Mitigation	Projects to make transportation infrastructure more resilient, including the use of natural infrastructure, to the effects of extreme weather and natural disasters. [Total cost unknown]	\$20,000
SC-WAT-P04-WAT	Neighborhood Traffic Plan	Plan to identify and address concerns regarding speeding, bicycle and pedestrian access and safety, and other neighborhood traffic issues (\$5k/yr).	\$140
SC-WAT-P80-WAT	Lake Avenue Underground Utilities	Underground existing overhead utilities.	\$2,400
RTC 17SC	Ecology Action Transportation Employer Membership Program	Community organization that promotes alternative commute choices. Work with employers, incentives for travelers to get out of SOVs including: emergency ride home, interest-free bike loans, discounted bus passes. Avg cost: \$90K/yr. Coordinates with Bike to Work program.	\$1,125
SC-CO 50-USC	Santa Cruz County Health Service Agency - Traffic Safety Education	Ongoing education program to decrease the risk and severity of collisions. Includes bicycle and pedestrian programs: Community Traffic Safety Coalition, South County coalition and Ride n' Stride Bicycle/Pedestrian Education Program.	\$2,500
SC-EA-03a-USC	Bike Challenge +	Online tracking and encouragement platform to encourage and reward people to bike commute more often. Twice-a-year monthly bike challenge, year-round encouragement tools, bike commuter workshops, marketing, group rides, and data/survey collection.	\$181
SC-RTC 02a-RTC	Cruz511 TDM and Traveler Information	Transportation demand management including centralized traveler information system and ride matching services. Outreach, education and incentives; multimodal traveler information system on traffic conditions, incidents, road and lane closures; ride matching service for carpools, vanpools, and bicyclists; services and information about availability and benefits of all transportation modes, including sharing rides, transit, walking, bicycling, telecommuting, alternative work schedules, alternative fuel vehicles, and park-n-ride lots. Avg annual cost: \$315k.	\$4,334
SC-RTC-15-RTC	Vanpool Incentive Program	Assist in start up and retention of vanpools. Includes financial incentives: new rider subsidies, driver bonuses, and empty seat subsidies. Also may include installation of wifi on vans. Avg Annual Cost: \$25k/yr.	\$100
SC-RTC-26-OTH	Bike To Work/School Program	Countywide education, promotion, and incentive program to actively encourage bicycle commuting and biking to school. Coordinates efforts with local businesses, schools, and community organizations to promote bicycling on a regular basis. Provides referrals to community resources. Avg annual cost: \$140K/yr-includes in-kind donations and staff time.	\$1,870

**Table C-3f: Santa Cruz County Transportation Demand Management Projects
(Continued)**

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-RTC-33-VAR	Cabrillo College TDM Programs	Provide students and employees at all four Cabrillo College campuses with education, promotion, and incentives that support the use of sustainable transportation modes. Develop information, programs and services customized to meet the transportation needs of the Cabrillo College community. 'Provide Sustainable Transportation education, promotion, and Go Green program enrollment to Cabrillo College students and employees. Partner with Cabrillo staff and students to reduce SOV trips to the Aptos, Watsonville and Scotts Valley campuses. Provided targeted information and services to Cabrillo members.	\$890
SC-RTC-P48-VAR	Climate Action Transportation Programs	Projects that reduce greenhouse gas emissions through reducing vehicle trips and vehicle miles traveled, increasing fuel efficiency and expanding use of alternatively fueled vehicles. Includes comprehensive outreach and education campaigns, a countywide emergency ride home for those using alternatives, and TDM incentive programs: \$100k/year.	\$2,330
SC-RTC-P49-RTC	RTC Bikeway Map	Bikeway Map and update GIS files as needed.	\$320
SC-RTC-P53-VAR	TDM Individualized Employer/Multiunit Housing Program	Implement individualized employer and multiunit housing TDM programs with incentives for existing development.	\$2,325
SC-RTC-P54-RTC	School-Based Mobility/TDM Programs	Student transportation programs aimed at improving health and well being, transportation safety and sustainability and that facilitate mode shift from driving alone in a motor vehicle to active and group transportation.	\$1,150
SC-UC-P61-UC	Traveller Safety Education/Information Programs	Bike/pedestrian safety programs; light and helmet giveaways, safety classes, distracted driver programs, bus etiquette program	\$100
SC-UC-P63-UC	UCSC Vanpool Program	Maintain, operate and expand upon UCSC vanpool program.	\$9,863
SC-UC-P68-UC	Parking Management Technology Improvements	Updating existing parking management technologies to allow for more effective management.	\$410
SC-UC-P69-UC	UCSC Commute Counseling Program	Staffing, program development to individually market to UCSC affiliates on more sustainable means of travel to campus.	\$3,100
SC-UC-P70-UC	UCSC Commuter Incentive Programs	Provide ongoing support and development of new programs to encourage travel to campus via sustainable modes of travel.	\$1,750
SC-UC-P73-UC	UCSC Parking Operations & Maintenance	Operate and administer the parking operations for UCSC including planning, TDM, marketing and debt service.	\$80,000

**Table C-3f: Santa Cruz County Transportation Demand Management Projects
(Continued)**

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-VAR-02-VAR	Project PASEO - Open Streets, Earn-a-Bike, Pop Up Bike Lanes, Slow Streets	Slow Streets temporary barricades and signage on neighborhood streets aimed at increasing space for walking and biking, reducing speeds and cut through traffic. Open Streets community events temporarily open roadways to bicycle and pedestrian travel only, diverting automobiles to other roadways. Earn-a-bike program provides bikes, tools, safety supplies, as well as bike repair, cycling safety, and nutrition education middle school students. Pop-up bike lanes is a temp demo of a protected bicycle lane. Open Streets: Santa Cruz, Watsonville, +; Earn-a-bike: middle schools; Pop-up Bike Lanes: Live Oak & Watsonville; Slow Streets: Unincorporated.	\$50
SC-VAR-P06-VAR	Carsharing Program	Program to assist people in sharing a vehicle for occasional use. Implementing Agency TBD, varies.	\$1,470
SC-VAR-P17-VAR	Eco-Tourism - Sustainable Transportation	Provide sustainable transportation information, incentives and promotions to the estimated one million visitors to Santa Cruz County. Work with the Santa Cruz County Conference and Visitors Council, local lodgings, and tourist attractions.	\$515
SC-VAR-P18-VAR	Mission Street/Hwy 1 Bike/Truck Safety Campaign	Partnership with road safety shareholders including Caltrans, UCSC, City of Santa Cruz, Ecology Action, trucking companies and others to improve bike/truck safety along the Mission Street corridor. Provide safety presentations, videos, brochures, safety equipment, etc.	\$520
SC-VAR-P19-VAR	School Safety Programs	Bicycle and walking safety education and encouragement programs targeting K-12 schools in Santa Cruz County including Ecology Action's Safe Routes to School and Bike Smart programs. Provide classroom and on the bike safety training in an age appropriate method. Provide a variety of bicycle, walking, busing and carpooling encouragement projects ranging from bike to school events, to incentive driven tracking, and educational support activities. Est. annual cost \$150k.	\$1,910
SC-VAR-P20-VAR	Public Transit Marketing	Initiatives that increase public transit ridership including discount passes, free fare days, commuter clubs, and promotional and marketing campaigns.	\$775
SC-VAR-P24-VAR	Countywide Senior Driving Training	Coordinate and enhance current programs that help maturing drivers maintain their driving skills and provides transitional info about driving alternatives. (Current programs are run by AARP and CHP.)	\$90
SC-VAR-P26-VAR	Park and Ride Lot Development	Upgrade and maintain existing park and ride lots for commuters countywide. Secure additional park and ride lot spaces for motorized vehicles and bicycles. Long range plan: identify, purchase land, construct Park & Ride lots.	\$3,100

**Table C-3f: Santa Cruz County Transportation Demand Management Projects
(Continued)**

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-VAR-P37-VAR	Transportation Demand Management Plan	Collaborate with other organizations to develop a coordinated plan for transportation demand management program implementation for Santa Cruz County.	\$310
SC-VAR-P40-VAR	Santa Cruz County Open Streets	Community events promoting alternatives to driving alone as part of a sustainable, healthy, and active life-style. Temporarily opens roadways to bicycle and pedestrian travel only, diverting automobiles to other roadways. (Average cost ~ \$25k/event)	\$250

Table C-3g: Santa Cruz County ADA Transit Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CTSA-P01-OTH	Countywide Specialized Transportation	Non-ADA mandated paratransit and other specialized transportation service for seniors and people with disabilities. Includes medical service rides, Elderday, out-of-county rides, Sr. Meal Site, Taxi Script, and same day rides etc. Current avg annual need \$2.58M. Constrained=\$2M.	\$51,750
SC-CTSA-P02-OTH	Lift Line Maintenance/Operations Center	Construct a permanent maintenance center/consolidated operations facility for paratransit program (currently Lift Line).	\$15,500
SC-MTD-02-MTD	ADA Paratransit Vehicle Replacements	Replace buses/vans for ADA paratransit fleet (including Accessible Taxi program).	\$5,250
SC-MTD-P10C-MTD	ADA Paratransit Service - Continuation of Existing Service	Operation & maintenance cost of existing Paratransit service. Avg Annual Cost: \$6.5M.	\$162,500
SC-MTD-P19-MTD	Transit Mobility Training Program Expansion	Expand public outreach and training to encourage fixed route, rather than Paratransit, use. Outreach may also involve other partners (ex. DMV, doctors, senior centers, etc). Avg annual cost: \$80K/yr.	\$2,000
SC-MTD-P28-MTD	ParaCruz Operating Facility	Design, Right-of-Way and construction for new ParaCruz Operating Facility.	\$12,400
SC-MTD-P30-MTD	ParaCruz Mobile Data Terminals/Radios	Replace mobile data terminals in vehicles.	\$400
SC-MTD-P51-MTD	ADA Access Improvements	Add or improve ADA accessibility to all bus stops and METRO facilities.	\$350
SC-RTC-P43-OTH	Senior Employment Ride Reimbursement	Reimburse low income seniors for transit expenses to/from employer sites.	\$1,600
SC-VAR-P48-VAR	On-Demand Wheelchair Accessible Vehicle Program	TNC Access for All Program to implement SB1376 (Hill: 2018) which directed the CPUC to establish a program relating to accessibility of on-demand transportation services for persons with disabilities, including wheelchair users who need a wheelchair accessible vehicle (WAV), to be funded in-part by Transportation Network Companies (e.g. Lyft/Uber) that do not have WAV fleet. [constrained reflects CPUC forecasted funds=\$60k/yr]	\$1,500

Table C-3h: Santa Cruz County Transit Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-MTD-P12-MTD	Hwy 17 Express Service Restoration and Expansion	Restore Hwy 17 Express service to FY16 levels, then expand service 2% annually. Restore \$353K/yr operating plus 2% annually plus capital costs (2 buses)	\$5,050
SC-MTD-P14-MTD	Local Transit Service Restoration and Expansion	Restore local service to FY16 levels, then expand service 2% annually. Restore \$7.0M/yr operating plus 2% annually plus capital costs (16 buses)	\$98,800
SC-RTC-P02-RTC	Public Transit on Watsonville-Santa Cruz Rail Corridor	Design, construction, and operation of public transit between Santa Cruz and Watsonville in the rail corridor. May be a joint project with the SCCRTC, SCMTD, and local jurisdictions. Annual op cost est: \$25M/yr; Capital: \$475M (Total cost reflects 2021 TCAA est. for rail). Pending final outcome of Transit Corridor Alternatives Analysis and environmental review. Cost shown includes 15 years of service during RTP period; Constrained=environmental/prelim. design assessment of possible future public transit system in the rail corridor right-of-way. 	\$25,000
SC-RTC-P60-RTC	Regional State Transit Assistance Projects	State Transit Assistance (STA) eligible transit projects	\$33,220
SC-UC-P23-UC	Transit Vehicles (ongoing)	Ongoing capital acquisition of transit vehicles for on-campus transit and University shuttles.	\$5,875
SC-VAR-P45-VAR	West Side Transit Hub	Transfer node near rail corridor at Natural Bridges Dr - may include transit, rideshare, bicycle, bikeshare, pedestrian to provide regional connections to/from other parts of the county and the university.	\$580
SC-VAR-P46-VAR	Live Oak Transit Hub	Transfer node near rail corridor at 17th Avenue - may include transit, rideshare, bicycle, bikeshare, pedestrian to provide regional connections to/from other parts of the county.	\$530
SC-VAR-P47-VAR	Watsonville Transit Hub	Expand transportation mode options at transfer node near rail corridor and current transit center to increase use of transit, rideshare, bicycle, bikeshare, pedestrian to provide regional connections to/from other parts of the county.	\$585

Table C-3i: Santa Cruz County Transit Operations Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-MTD-P10B-MTD	Hwy 17 Express Service - Continuation of Baseline Service Levels	Operation & maintenance cost of existing Highway 17 Express bus service. Avg annual cost: \$5.3M.	\$132,500
SC-MTD-P10-MTD	Local Transit - Continuation of Baseline Service Levels 2020-2045	Operation & maintenance cost of existing local fixed route bus service. Avg annual cost: \$42.1M.	\$1,146,898
SC-RTC-P58-RTC	Real-Time Transit Info	Develop and maintain system for disseminating real time transit arrival and departure information to Santa Cruz Metro users. To be developed in coordination with Santa Cruz Metro.	\$220
SC-UC-P74-UC	UCSC Transit Service	Operate the on campus shuttle service and Night Owl (\$3.01m/year).	\$77,750
SC-UC-P75-UC	Disability Van Service	Operate disability van service (\$240k/yr).	\$6,250
SC-VC-P1-OTH	Volunteer Center Transportation Program	Program providing specialized transportation to seniors and people with disabilities. Constrained = existing TDA allocations.	\$1,640

Table C-3j: Santa Cruz County Transit Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MTD 18SC	Account-Based Electronic Fare Collection System	Account-based electronic fare collection system including the ability to use a variety of fare media including smart cards, mobile tickets on smartphones, contactless credit and debit cards, Google Pay and Apple Pay. Replacement of fareboxes at the end of useful life for cash acceptance onboard. Replacement Transit Fareboxes, Ticket Vending Machines or Retail Vendor Network.	\$2,250
SC-MTD-13-MTD	Santa Cruz Metro Center/Pacific Station Renovation	Renovate Pacific Station or construct new transit center in alternate location as part of development partnership with the City of Santa Cruz.	\$25,000
SC-MTD-P04-MTD	Bus Replacements	Replace fleet at the end of normal bus lifetime (approximately every 12 years; \$700 each for local fixed route; \$900k each for Hwy 17 Over the Road coaches). \$1.25M for ZEB	\$67,200
SC-MTD-P31-MTD	Bus Rebuild and Maintenance	Rebuild engines; Fleet maintenance equipment. Avg. cost is ~\$250k/bus, increases useful life up to 8 years at 40% of the cost of new buses.	\$6,000
SC-MTD-P32-MTD	Non-Revenue Vehicle Replacement	Replace support vehicles.	\$1,000
SC-MTD-P36-MTD	Metro Facilities Repair/Upgrades	Maintain and upgrade facilities.	\$4,300
SC-MTD-P52-MTD	Bus Stop and Station Improvements	Improve customer access and/or amenities at bus stops; add bus stop pads to preserve pavement.	\$500
SC-RTC 03e-RTC	Rail Line: Pajaro River Railroad Bridge Rehabilitation	Rehabilitate the bridge structure and tracks over Pajaro River.	\$670
SC-SV-P46-SCV	Mt Hermon/King's Village Road - Transit Signal Priority	Transit signal priority at Kings Village Road/Mt Hermon Road.	\$80
SC-UC-P62-UC	Bus Tracking and AVL Transit Programs	GPS bus tracking and Automatic Vehicle Locator programs inform travelling population of transit locations so they can make informed mode choices.	\$260
SC-UC-P64-UC	Alternative Fuel Fleet Vehicles	Purchase and upgrade fleet vehicles to alt. fueled vehicles (refuse trucks, street sweepers, fleet cars, etc.)	\$500

Table C-3k: Santa Cruz County Transportation System Management Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
RTC 01SC	Freeway Service Patrol (FSP) on Hwy 1 and Hwy 17	Maintain and expand tow truck patrols on Highways 1 and 17. Work with the CHP to quickly clear collisions, remove debris from travel lanes, and provide assistance to motorists during commute hours to keep incident related congestion to a minimum and keep traffic moving. Avg need: \$300k/yr constrained (some from SB1); \$430k/yr total cost.	\$7,500
SC-CAP-P50-CAP	Capitola-wide HOV priority	Evaluate HOV priority at signals and HOV queue bypass.	\$40
SC-CHP-P01-CHP	Hwy 17 Safety Program	Continuation of Highway 17 Safety Program in Santa Cruz County at \$100/year. Includes public education and awareness, California Highway Patrol (CHP) enhancement, pilot cars, electronic speed signs.	\$3,750
SC-CHP-P04-CHP	Hwy 1 Safety and Bus on Shoulder Enforcement	Additional CHP enforcement and public education campaign when new bus on shoulder facilities operational (anticipate 4 years of enforcement).	\$250
SC-CT-P63-CT	Hwy 129 Paving, Sign Panels, Lighting, TMS Improvement	Rehabilitate pavement and lighting, replace sign panels, and install Transportation Management System (TMS) elements.	\$16,851
SC-CT-P64-CT	Hwy 1 Drainage Improvements	Rehabilitate drainage systems and lighting, install Transportation Management System (TMS) elements, pave areas behind the gore and construct Maintenance Vehicle Pullouts (MVPs) to reduce maintenance and enhance highway worker safety.	\$16,554
SC-CT-P65-CT	Hwy 1 Roadside Safety	Rehabilitate drainage systems, enhance highway worker safety, replace lighting and install Transportation Management System (TMS) elements.	\$24,021
SC-CT-P80-CT	Hwy 236 Drainage and System Upgrades in Boulder Creek	Drainage System and TMS upgrades	\$13,400
SC-MTD-P06-MTD	Transit Technological Improvements	IT software and hardware upgrades for scheduling, customer service and planning systems. Upgrades every 5 years.	\$2,500
SC-MTD-P50-MTD	ITS Equipment: Automatic Passenger Counter System and Real Time Bus Arrival/Departure Displays	Automatic Vehicle Locator (AVL), Automatic Passenger Counters, and automatic vehicle announcing systems on METRO buses. Provide real time bus arrival/departure displays at bus stops. Necessary IT upgrades and data collection for system operations, security, planning and maintenance.	\$1,600
SC-RTC 34-RTC	Hwy 1 Ramp Metering: Northern Sections Between San Andreas Road and Morrissey Blvd	Reconfiguration of ramps and local streets to allow for ramp metering and installation of ramp meters. Could be expensed under a separate stand alone project (\$6.7 M)	\$1

**Table C-3k: Santa Cruz County Transportation System Mangement Projects
(Continued)**

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-RTC-P01-RTC	SAFE: Call Box System Along Hwys	Motorist aid system of telephone call boxes along all highways plus maintenance and upgrades. Call boxes may be used to request assistance or report incidents. Avg annual cost: \$245/yr	\$6,125
SC-SC-P135-SCR	Advance Dilemma Zone Detection and Retroreflective Signal Back Plate Upgrades	Install advanced dilemma Zone traffic signal detection and upgrade signal heads retroreflective back plate and yellow/orange border.	\$1,258
SC-SC-P136-SCR	Hwy 1 Mission St at Fair Ave Intersection Modification	Install Traffic Signal with left-turn lane (NB) to reduce congestion and improve safety.	\$700
SC-SV-P42-SCV	Synchronize Traffic Signals along Mt. Hermon Road	Re-time to coordinate traffic signals along Mt. Hermon Road.	\$100
SC-UC-P58-UC	UCSC Traffic Control	Non-traditional traffic control/crossing guard program at key intersections on UCSC campus to improve pedestrian and vehicle safety, reduce conflicts, improve travel times.	\$2,580
SC-VAR-P34-VAR	Transit Priority	Install transit queues at major intersections.	\$2,585
SC-WAT-P78-WAT	Green Valley Adaptive Signal Project	Update signals to provide dynamic signal timing, optimizing traffic flow and decreasing vehicle emission.	\$400

Table C-4a: Monterey County Active Transportation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-CAR017-CM	Rio Rd Mission School Bicycle Connection	School by constructing a Class I bicycle path and	\$1
MON-CAR018-CM	Rio Road Carmel Middle School Bicycle Connection	Install Class II Bike Lanes on Rio Road; Install Class I Path from Val Verde Drive - Carmel Middle School.	\$1,500
MON-CAR019-CM	Highway 1 Intersection Improvements Through Carmel (Rio Road/Ocean/Carpenter)	Bicycle detection to cross Hwy 1 ; ADA ramps; audible countdown; widen shoulders for bicycles; upgrade wayfinding signage to add distances.	\$200
MON-CAR020-CM	Carmel to Monterey Bicycle Connection	Bikeway improvements and wayfinding signage along Hwy 1/Hwy 68 West/Viejo Road Path/Viejo Road and Soledad Drive. Install painted class II bike lanes Viejo Road and Soledad Drive.	\$700
MON-CAR023-CM	Scenic Pathway Pedestrian Trail	Install ADA ramps, ADA parking, and hardscape safety improvement along the Scenic Pathway	\$400
MON-CAR037-CM	US Bike Route 95 Corridor Class II Bike Improvements	Install signs, pavement markings, intersection modifications, etc. along the USBR 95 route	\$100
MON-DRO004-DR	Carlton Dr Traffic Calming and Bicycle/Pedestrian Improvements	Install Class II bikeway, sidewalk and traffic circle on Carlton Dr to reduce speed of traffic bypassing Hwy 218 and to provide better pedestrian and bicycle access to Del Rey Oaks and Seaside.	\$1
MON-DRO005-DR	Carlton Dr/Hwy 218 Intersection Improvements	Block slip lane from Work Ave to Carlton Dr but allow bicycle and pedestrian access; Install sidewalk and curb extensions on both sides of Carlton Dr and a transit pull out east of Carlton Dr on Hwy 218; install rapid flashing beacons and increase visibility of pedestrian crossing.	\$1
MON-GRN023-GR	Downtown Streetscape Plan	Develop and implement a Downtown Streetscape plan that will provide a safe place to walk and bike	\$1
MON-GRN024-GR	El Camino Real Pedestrian Crossing Improvements	Install ADA ramps at midblock crossings; Increase visibility of all marked ped crossings along El Camino Real.	\$1

Table C-4a: Monterey County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-KCY036-CK	Pavement/Sidewalk Management System P/SMS	Add Sidewalk, Update Pavement Management system, City Road/Sidewalk conditions/needs (Financial Information Estimated)	\$1
MON-MAR070-MA	Reservation Rd Cycle Track	Install Class IV bike lanes	\$3,000
MON-MAR087-MA	Citywide Class II Bike Lanes Project	Install Class II Bikelanes	\$300
MON-MAR123-MA	Intergarrison Sidewalk Gap	Improve pedestrian crossings	\$1
MON-MAR124-MA	Del Monte Blvd Sidewalks	Construct new sidewalk and pavement.	\$1
MON-MAR125-MA	Reservation Rd Bike Detection	Install bike detection at signalized intersections along Reservation Rd.	\$1
MON-MAR126-MA	Imjin Pkwy Bike Detection	Install bike detection at signalized intersections along Imjin Pkwy.	\$1
MON-MAR128-MA	Beach Road - Del Monte Blvd	Traffic signalization; make accomodations for bicyclists and pedestrians.	\$1
MON-MAR130-MA	Intergarrison Sidewalk Gap	Fill sidewalk gap on Inter-Garrison Rd	\$1
MON-MRY037-MY	Citywide Wayfinding Sign Program	Provide a comprehensive vehicular, pedestrian and bicycle wayfinding sign program	\$900
MON-MRY040-MY	Del Monte and Casa Verde/Rec Trail Improvements	Add pedestrian and bike safety improvements and protected lefts at Del Monte/Casa Verde/Rec Trail	\$577
MON-MRY041-MY	N Fremont Class I/ Class IV Gap Closure	Add Class 1 and/or Class IV connection to N Fremont project to FORTAG	\$1,200
MON-MRY042-MY	Lake El Estero Class I	Add Class 1 facilities on Fremont, Camino Aguajito and Camino El Estero to link Rec Trail to El Estero Park	\$3,000
MON-MRY043-MY	Mark Thomas Class 1	Connect N Fremont project to downtown via Mark Thomas and Fairgrounds Road	\$2,000
MON-MRY044-MY	Garden Road	Pedestrian and bike improvements on Garden Rd to connect future housing to Businesses	\$1,000
MON-MYC001-UM	Alisal Road	Install Class III bikeway	\$7
MON-MYC002-UM	San Benancio - Corral de Tierra Rd Loop	Install Class II bikeway	\$530
MON-MYC029-UM	Florence St. Extension	Install Class II bikeway	\$276
MON-MYC030-UM	Gonzales - River Road	Install Class II bikeway	\$1,127
MON-MYC036-UM	Hall Road - Tarpey Road	Install Class II bikeway	\$1,000

Table C-4a: Monterey County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MYC042-UM	Jonathan St. Extension	Install Class I bikeway	\$255
MON-MYC045-UM	Las Lomas Dr Bicycle Lane & Pedestrian Project	Install Class II bikeway, new sidewalks, curb & gutter, and a new drainage and water system.	\$2,673
MON-MYC056-UM	Monte Road	Install class II bikeway	\$1,989
MON-MYC059-UM	Nacimiento-Ferguson Rd	Shoulder widening & geometrics	\$18,500
MON-MYC060-UM	Natividad Road	Install Class II bikeway	\$2,453
MON-MYC063-UM	Old Stage Road/Hebert Road	Install Class III bikeway	\$720
MON-MYC064-UM	Pajaro River Levee Trail	Install Class I bikeway	\$850
MON-MYC068-UM	Porter Drive	Install Class III bikeway	\$36
MON-MYC070-UM	Prunedale South Road	Install class II bikeway	\$3,127
MON-MYC078-UM	Rogge Road	Install Class II bikeway	\$1,414
MON-MYC095-UM	South Boundary Road	Install Class II bikeway.	\$1,934
MON-MYC114-UM	Reservation Rd.	Install Class II bikeway	\$6,099
MON-MYC121-UM	Tarpy Rd Improvements	LT Channelization and improve shoulders	\$1,000
MON-MYC126-UM	Abrams Dr	Install class III bikeway	\$3
MON-MYC127-UM	Alta St/Old US Hwy 01	Install Class III bikeway	\$4
MON-MYC128-UM	Arroyo Seco Rd	Install Class III bikeway	\$24
MON-MYC130-UM	Artichoke Avenue	Install Class III bikeway	\$442
MON-MYC131-UM	Bishop St	Install class III bikeway	\$1
MON-MYC132-UM	Blackie Rd	Install class III bikeway	\$1
MON-MYC135-UM	Bluff Rd	Install class III bikeway	\$5
MON-MYC137-UM	Brooklyn Street	Install class III bikeway	\$600
MON-MYC139-UM	Canada de la Segunda	Install class III bikeway	\$12
MON-MYC140-UM	Carmel River Bridge	Install class I bikeway	\$540
MON-MYC141-UM	Carmel Valley Class I Bicycle Path Project Phase IV	Install Class I bikeway.	\$1,275
MON-MYC142-UM	Carmel Valley Rd	Install class II bikeway	\$278
MON-MYC143-UM	Carmel Valley Rd at Boronda Rd Intersection	Intersection improvements	\$1,278
MON-MYC144-UM	Carmel Valley Rd at Country Club Drive	Intersection improvements	\$1,120
MON-MYC148-UM	Cattleman Rd	Install class III bikeway	\$51

Table C-4a: Monterey County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MYC160-UM	CVMP - Class II Bike Lanes	Install Class II Bike Lanes	\$308
MON-MYC170-UM	Drainage Pond/Miller Property	Install class II bikeway	\$16
MON-MYC171-UM	El Camino Real	Install class III bikeway	\$1
MON-MYC172-UM	Elkhorn Rd	Install class II bikeway	\$194
MON-MYC173-UM	Elm Ave	Install class III bikeway	\$14
MON-MYC174-UM	Elm Ave	Install class III bikeway	\$7
MON-MYC175-UM	Espinosa Rd	Install class III bikeway	\$8
MON-MYC176-UM	Espinosa Rd	Install class III bikeway	\$6
MON-MYC177-UM	Foletta Rd	Install class III bikeway	\$12
MON-MYC178-UM	Fort Romie Rd	Install class III bikeway	\$12
MON-MYC179-UM	Fremont St	Install class III bikeway	\$1
MON-MYC180-UM	Front Rd Extension	Install class II bikeway	\$95
MON-MYC187-UM	Gloria Road	Install Class II bikeway	\$2,055
MON-MYC189-UM	Grant St	Install class III bikeway	\$2
MON-MYC190-UM	Harkins Rd	Install Class II bikeway	\$68
MON-MYC196-UM	Iverson Rd	Install Class II bikeway	\$5,000
MON-MYC197-UM	Iverson Road	Install Class II bikeway	\$2,600
MON-MYC198-UM	Jetty Road/Pajaro River (Zmudowski Beach)	Install Class I bikeway.	\$5,729
MON-MYC199-UM	Johnson Canyon Road	Install Class II bikeway	\$1,350
MON-MYC203-UM	Lanini Rd	Install class II bikeway	\$2,000
MON-MYC204-UM	Main St	Install class II bikeway	\$6
MON-MYC205-UM	McCoy Road	Install Class II bikeway.	\$3,868
MON-MYC206-UM	McCoy Road	Install Class II bikeway.	\$87

Table C-4a: Monterey County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MYC207-UM	McGowan Rd - MBSST	Install class III bikeway	
MON-MYC208-UM	Mead St	Install class III bikeway	\$1
MON-MYC209-UM	Meade St (Extension)	Install class II bikeway	\$2
MON-MYC210-UM	Meridian Rd	Install class III bikeway	\$8
MON-MYC211-UM	Meridian Rd Path	Install class I bikeway	\$95
MON-MYC212-UM	Mesa Verde	Install class III bikeway	\$8
MON-MYC213-UM	Monte Rd - MBSST	Install class II bikeway	\$81
MON-MYC214-UM	Monterey Bay Sanctuary Scenic Trail- Moss Landing	Install bikeway and bridge.	\$9,159
MON-MYC215-UM	Moro Rd	Install class III bikeway	\$6
MON-MYC216-UM	Moss Landing Road Bike Lanes, Storm Drain, and Street Improvements	Install class II/III bikeway and curb, gutter, and sidewalks.	\$3,228
MON-MYC218-UM	Nashua Road	Install Class III bikeway	\$1
MON-MYC220-UM	Old Stage - San Juan Grade	Install class III bikeway	\$13
MON-MYC221-UM	Old Stage Rd	Install class III bikeway	\$1
MON-MYC222-UM	Ormart Rd	Install Class III bikeway	\$1
MON-MYC223-UM	Pajaro Rail Line	Install class I bikeway	\$448
MON-MYC224-UM	Payson St - Chualar Rd	Install class III bikeway	\$4
MON-MYC226-UM	Pesante Rd	Install class III bikeway	\$2
MON-MYC228-UM	Portola Dr	Install class II bikeway	\$16
MON-MYC229-UM	Prunedale North Rd	Install class II bikeway	\$46
MON-MYC230-UM	Reese Cir - Country Meadows Rd	Install class III bikeway	\$3
MON-MYC236-UM	Russell Road	Install Class II bikeway	\$1,105
MON-MYC237-UM	Salinas Rd - Hall Rd - Tarpey Rd	Install class II bikeway	\$74
MON-MYC239-UM	Salinas Street	Install Class I/II bikeway.	\$360
MON-MYC241-UM	San Juan Grade Rd	Install Class II bikeway	\$88
MON-MYC242-UM	San Juan Grade Rd	Install class III bikeway	\$1
MON-MYC244-UM	San Juan Rd	Install Class II bikeway	\$5
MON-MYC249-UM	Sanctuary Scenic Trail Segment 10	Install class I bikeway	\$2,058
MON-MYC250-UM	Sanctuary Scenic Trail Segment 11	Install class I bikeway	\$634
MON-MYC253-UM	Sanctuary Scenic Trail Segment 14	Install class I bikeway	\$2,800

Table C-4a: Monterey County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MYC254-UM	Sanctuary Scenic Trail Segment 14	Install class I bikeway	\$258
MON-MYC255-UM	Sanctuary Scenic Trail Segment 14A	Install class I bikeway	\$835
MON-MYC256-UM	Sanctuary Scenic Trail Segment 17A	Install class I bikeway	\$699
MON-MYC257-UM	Sanctuary Scenic Trail Segment 17B	Install class I bikeway	\$1,659
MON-MYC259-UM	Sanctuary Scenic Trail Segment 9	Install class I bikeway	\$37
MON-MYC261-UM	Seymour St	Install class III bikeway	\$2
MON-MYC262-UM	Sill Road	Install Class II bikeway.	\$696
MON-MYC265-UM	Strawberry Rd	Install class III bikeway	\$10
MON-MYC267-UM	Susan Ln	Install class III bikeway	\$1
MON-MYC268-UM	Tafton Rd	Install class III bikeway	\$8
MON-MYC269-UM	Tafton Rd	Install class III bikeway	\$2
MON-MYC270-UM	Tafton Rd - MBSST	Install class III bikeway	\$3
MON-MYC271-UM	Tavernetti Rd	Install class II bikeway	\$94
MON-MYC272-UM	Tavernetti Rd	Install class III bikeway	\$1
MON-MYC272-UM	Tavernetti Road	Install class II bikeway	\$553
MON-MYC274-UM	Teague Ave	Install class III bikeway	\$4
MON-MYC275-UM	Tembladero Slough	Install class II bikeway	\$221
MON-MYC276-UM	Thorne Rd	Install class III bikeway	\$11
MON-MYC277-UM	Werner Rd	Install class II bikeway	\$9
MON-MYC279-UM	Merritt St Pedestrian Crossing Enhancement	Install curb extension and crosswalk treatments along Merritt St.	\$1
MON-MYC280-UM	Geil Neighborhood Shared Street	Install a class III bicycle route, wayfinding signage, and crosswalks at intersections. Install additional street lighting along route.	\$1
MON-MYC281-UM	Grant St Bicycle/Pedestrian improvements	Install class II/III bikeway; Install sidewalk along Grant St.	\$1
MON-MYC282-UM	Porter/Main Intersection Improvement	Improve intersection to better accommodate bicyclists and pedestrians.	\$1
MON-MYC329-UM	Esquiline Road Pedestrian Crossing	Pedestrian crossing (Bridge 509)	\$2,000

Table C-4a: Monterey County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MYC330-UM	Carmel Valley Road Class II Bikeway	Install Class II Bikeway and shoulder widening on south side of Carmel Valley Road from Carmel Rancho Blvd to Carmel Middle School	\$508
MON-MYR030-MY	North Fremont Intersection Improvements and Class II Bikeway	Reconstruct intersections, realign roadways, install signals, install Class II bikeway and bike detection.	\$1
MON-PGV016-PG	Forest Ave Pedestrian Improvements	Install sidewalk ; detectable warning; increase visibility of crosswalks; install curb extensions	\$1
MON-PGV018-PG	Lighthouse Ave Bikeway	Install wayfinding signage and pavement markers	\$1
MON-PGV020-PG	Pine Ave Pedestrian Safety Improvements	Install traffic calming features along Pine Ave without interrupting right-of-way for future bike lane and fill sidewalk gaps.	\$1
MON-PGV021-PG	George Washington Park Entry Median and crossing	Install an entry median at Pine Ave/Alder, ADA ramps, marked crosswalks and lighting.	\$1
MON-PGV022-PG	Central Ave Bikeway	Install class II/III bikeway and wayfinding signage along Central Ave.	\$1
MON-PGV023-PG	Central Ave/Eardly Pedestrian Crossing/Access Improvements	Install curb extension, ADA ramps and rapid flashing beacons at Central Ave/Eardly.	\$1
MON-SCY008-SA	Bike Racks	Install Bicycle racks and other conveniences improvements	\$1
MON-SEA031-SE	Noche Buena Bicycle Boulevard	Traffic Calming; wayfinding signage and on-pavement markings (Class II/III).	\$1
MON-SEA034-SE	ADA Improvements	Install sidewalks and curb and gutter citywide to improve pedestrian access and connectivity.	\$1
MON-SNS132-SL	Salinas Rd Wayfinding	Install bicycle and auto wayfinding signage along Salinas Rd.	\$1
MON-SNS133-SL	Davis Road Bike Path	Install .57 mile bike path	\$200
MON-SNS136-SL	Calle Del Adobe Streetscape	Plant shade trees; native vegetation along Calle Del Adobe path.	\$1
MON-SNS284-SL	E. Laurel Street Class IV facilities	Install Class IV bike facilities (VMT Banking Project)	\$31,830
MON-SNS285-SL	Natividad Road Class IV facilities	Install Class IV bike facilities (VMT Banking Project)	\$22,250
MON-SNS286-SL	N. Main Street Class IV facilities	Install Class IV bike facilities (VMT Banking Project)	\$15,030

Table C-4a: Monterey County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-SNS287-SL	Sanborn Road Class IV facilities	Install Class IV bike facilities (VMT Banking Project)	\$17,020
MON-SO077-SO	Bryant Canyon Bike Trail	Bryant Canyon Bike Trail; construct bike lanes or trail	\$750
MON-SOL078-SO	San Vicente Bike Trail	San Vicente Bike Trail; construct bike lanes or trail	\$400

Table C-4b: Monterey County Highway Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-CT-046-CT	SR 1 Improvements	Elevate and widen Highway 1 from SR 183 to Salinas Road with operational improvements and a frontage road	\$750,000
MON-GON018-GO	US 101/North Alta/ Associated Lane Interchange	Modify interchange with roundabouts at on / off ramps	\$20,000
MON-GRN005B-GR	US 101/Thorne Road Interchange	Construct complete new interchange to replace substandard existing overpass.	\$20,482
MON-GRN009-GR	New On-Ramp at US 101 and Thorne Road	Construct new on-ramp.	\$14,000
MON-GRN022-GR	US 101 - Pine Avenue Overcrossing	Construct new bridge over US-101 to improve E-W traffic flow -- PM 53.86/54.78.	\$30,482
MON-MAR155-MA	Imjin Pkwy at SR1	Construct new interchange (Caltrans Regional TIP)	\$40,000
MON-MAR156-MA	Del Monte Blvd at SR1	Construct new interchange (Caltrans Regional TIP; associated with MAR155)	\$12,375
MON-MYC149B-UM	US 101 - Over Crossing in Pine Canyon	New connection to US 101 -- PM 43.19	\$20,000
MON-SNS055-SL	US 101 - SR 183 Interchange	Construct new interchange	\$12,900
MON-SOL004-SO	US 101 - Camphora Interchange	Install new interchange at Camphora-Gloria Street.	\$35,500

Table C-4c: Monterey County Highway Operations, Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-CT004-CT	SR 1 - Big Sur Vista Pt	Vista Point Interpretive Displays	\$1
MON-CT042-UM	SR 68 - York Road	Intersection improvements -- PM 8.16	\$1
MON-GRN020-GR	US 101/Espinoza Interchange	Bridge widening and interchange improvement, signals, or new interchange.	\$40,000
MON-MAR084-MA	SR 1 - Reservation Road	Install new traffic signals PM BR86.48/EB R86. 51	\$500
MON-MYC099-UM	SR 1 - SR 156 Interchange Improvements	Construct ramp connectors	\$1
MON-MYC107-UM	SR 183 - SR 156 Interchange Improvements	Improve ramps-- PM T92.21	\$1
MON-MYC136B-UM	SR 1 - Merritt St - Artichoke Ave Improvements (Phase I)	Interchange/Intersection improvements PM T92.21	\$12,000
MON-MYC137B-UM	SR 1 - Merritt St - Artichoke Ave Improvements (Phase II)	Interchange/Intersection improvements PM T92.21	\$1
MON-MYC159B-UM	SR 156 - Oak Hills Subdivision Access Improvement	Improve access into and out of Oak Hills Subdivision.	\$1
MON-SNS054-SL	US 101 - Laurel Drive	Interchange and offramp improvements -- PM R89.27	\$1

Table C-4d: Monterey County Local Streets and Road Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-GON005-GO	Fanoe Road	Widen from 4 to 6 lanes and install Class II bike lanes.	\$30,000
MON-GON006-GO	Herold Parkway	Extend road and install Class II bike lanes.	\$40,000
MON-GON007-GO	Gloria Road Widening	Widen road to three lanes for approximately 1/2 mile.	\$11,000
MON-GON016-GO	Associated Lane from US 101 to Fanoe Road	Construct new four lane arterial roadway from US 101 to Fanoe Road.	\$28,000
MON-MAR054-MA	Michael Dr New Connection	Construct new street with land acquisition	\$2,500
MON-MAR077-MA	Salinas Ave Rehab	Construct new 2 lane arterial. Complete streets design with the widening. Previous FORA project.	\$2,626
MON-MAR131-MA	Imjin Rd & 8th St	Construct new roundabout (Associated with MAR025)	\$2,000
MON-MAR143-MA	Reservation Rd & Del Monte Blvd	Lane configuration improvements	\$106
MON-MAR162-MA	Reservation Rd Widening	Widen from 4 lanes to 6 lanes, Imjin to Blanco	\$8,193
MON-MYC125-UM	Espinosa Rd Widening	Widen to four travel lanes with Class II bike lanes on Espinosa Rd between SR-183 and US -101.	\$27,000
MON-MYC183-UM	G17 Widening (Reservation Road)	Widen to Four Lanes with Class II bike lanes on Reservation Rd from Davis Rd to SR 68.	\$30,300
MON-MYC184-UM	G17 Widening (River Road)	Widen to Four Lanes from Las Palmas Road to Las Palmas Parkway.	\$20,700
MON-MYC195-UM	Hebert Road/Old Stage Road Widening	Widen Hebert Rd to Four Lanes from San Juan Grade Rd to Old State Rd and Widen Old Stage Rd to Four Lanes from Hebert Rd to Salinas City Limit. Install traffic signals at Old Stage Rd/Natividad Rd./ and San Juan Grade Rd/Herbert Rd. Add turn lanes and shoulder improvements on Old Stage Rd. from Natividad Rd to the Salinas City Line. Provide signage to designate as a Class III bike route.	\$20,400
MON-MYC201-UM	Johnson Cyn Land - Phase II	New Road Construction and Widening	\$7,700
MON-MYC243-UM	San Juan Grade Road Improvements	Widen to four Lanes and construct raised center median from Herbert Rd to Crazy Horse Canyon Rd. Add Class II bike lanes on San Juan Grade Rd along project extent. Install traffic signal and realign San Juan Grade Rd/Crazy Horse Canyon Rd intersection.	\$10,400

**Table C-4d: Monterey County Local Streets and Road Improvement Projects
(Continued)**

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-SOL008-SO	Front Street Extension	Construct to 4 lanes and install Class Ii bike facility.	\$1
MON-SOL009-SO	Market Street Extension	Construct to 2 lanes install Class Ii bike facility. \$1.00	\$1
MON-SOL010-SO	San Vicente Road	Construct to 4 lanes install Class Ii bike facility.	\$1
MON-SOL011-SO	San Vicente Road	Construct to 4 lanes install Class Ii bike facility.	\$1
MON-SOL012-SO	Gabilan Drive Extension	Construct to 4 lanes install Class Ii bike facility.	\$1
MON-SOL015-SO	Front Street Extension	Construct to 4 lanes and install Class Ii bike facility.	\$1
MON-SOL016-SO	Orchard Lane	Construct to 2 lanes install Class Ii bike facility. \$1.00	\$1
MON-SOL017-SO	Bryant Canyon Road(N-S)	Construct to 4 lanes , install Class II bike facility.	\$1
MON-SOL018-SO	Camphora Gloria Road	Construct to 4 lanes install Class Ii bike facility.	\$1
MON-SOL019-SO	New Collector 1	Construct to 2 lanes install Class Ii bike facility.	\$1
MON-SOL020-SO	San Vicente Road Extension	Construct to 2 lanes install Class Ii bike facility.	\$1
MON-SOL021-SO	New Arterial 1	Construct to 4 lanes install Class Ii bike facility.	\$1
MON-SOL022-SO	New Arterial 2	Construct to 2 lanes install Class Ii bike facility.	\$1
MON-SOL023-SO	West Street Extension	Construct to 4 lanes install Class Ii bike facility.	\$1
MON-SOL024-SO	Orchard Lane Extension	Construct to 2 lanes install Class Ii bike facility.	\$1
MON-SOL025-SO	Crest Street	Construct to 2 lanes install Class Ii bike facility.	\$1
MON-SOL026-SO	S Street	Construct to 2 lanes install Class Ii bike facility.	\$1
MON-SOL027-SO	Frontage Road	Construct to 4 lanes install Class Ii bike facility. \$1.00	\$1
MON-SOL045-SO	Gabilan Drive Extension	Construct to 4 lanes install Class Ii bike facility.	\$1
MON-SOL055-SO	Front Street Extension - 1	Front Street Extension (1) (2001 TIF R1); Construct to 4 lanes	\$5,236
MON-SOL056-SO	Front Street Extension - 2	Front Street Extension (2) (2007 TIF R9); Construct to 4 lanes	\$24,915
MON-SOL057-SO	Market Street Extension -2	Market Street Extension (2) (2007 TIF R2); construct to 2 lanes	\$2,495
MON-SOL058-SO	Gabilan Drive Extension - 1	Gabilan Drive Extension (1) (2007 TIF R6); Construct 4 lanes	\$12,964

**Table C-4d: Monterey County Local Streets and Road Improvement Projects
(Continued)**

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-SNS001-SL	Westside Bypass	Construct 4-lane westside bypass around Salinas from Boranda to Davis Rd, including 4-lane Rossi St connector. Includes widening of Davis to 4 lanes from bypass connection to W Blanco Rd.	\$50,472
MON-SNS053-SL	San Juan Grade Widening	Widen from 2 to 4 lanes	\$3,190
MON-SOL059-SO	Gabilan Drive Extension - 2	Gabilan Drive Extension (2) (2007 TIF R7); construct to 4 lanes	\$14,469
MON-SOL060-SO	San Vicente Rd Widening	San Vicente Road Widening (1) (2007 TIF R3); Construct to 4 lanes AND San Vicente Road Widening (2) (2007 TIF R4); Construct to 4 lanes	\$5,762
MON-SOL062-SO	San Vicente Rd Widening - 3	San Vicente Road Widening (3) (2007 TIF R5); Construct to 4 lanes	\$7,922
MON-SOL063-SO	Orchard Lane	Orchard Lane (2007 TIF R10); Construct to 4 lanes	\$6,630
MON-SOL064-SO	Bryant Canyon Rd	Bryant Canyon Rd (2007 TIF R11); Construct to 4 lanes	\$14,136
MON-SOL066-SO	New North-South Collector 1	New Collector I (2007 TIF R13); Construct to 2 lanes parallel to Camphora Gloria Road in northwest portion of Future Growth Area	\$10,443
MON-SOL067-SO	San Vicente Road Extension	San Vicente Road Extension (2007 TIF R14); Construct to 2 lanes north of Gabilan Drive along west side of Miramonte Specific Plan	\$11,320
MON-SOL068-SO	New East-West Arterial I - 1	New Arterial I (1) (2007 TIF R15); Construct to 4 lanes in Future Growth Area between Camphora Gloria Road and existing northeast corner of City	\$37,079
MON-SOL069-SO	New East-West Arterial I - 2	New Arterial I (2) (2007 TIF R16); Construct to 2 lanes along northern boundary of existing City between Orchard Lane and West Street	\$4,614
MON-SOL070-SO	West Street Extension to Camphora Gloria Rd	West Street Extension (2007 TIF R17); Construct to 4 lanes	\$40,516
MON-SOL071-SO	Orchard Lane Extension to Camphora Gloria Rd	Orchard Lane Extension (2007 TIF R18); Construct to 2 lanes in northern portion of the Future Growth Area	\$30,744
MON-SOL072-SO	Crest Street	Crest Street (2007 TIF R19); Construct to 2 lanes	\$2,813
MON-SOL073-SO	S Street	S Street (2007 TIF R20); Construct to 2 lanes	\$2,161
MON-SOL074-SO	Frontage Road	Frontage Road (2007 TIF 21); Construct to 4 lanes	\$25,928

Table C-4e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-CAR011-CM	5th Avenue Rehabilitation	Repave and sidewalk repairs.Repairs completed for earlier phase- Junipero to Mission and Dolores to Monte Verde Streets	\$75
MON-CAR030-CM	Rio Rd Drainage Culverts Reconstruction	Upsize existing, dual culverts under Rio Rd for adequate capacity of flow to Carmel River	\$2,420
MON-CAR033-CM	San Antonio and Eleventh Drainage Improvements	Reduce overland flow issues by extending the Eleventh Ave drainage system to San Antonio	\$400
MON-CAR034-CM	Carpenter Avenue Drainage Improvements	Install an underground drainage system along Carpenter to remove overland flow	\$270
MON-GRN019-GR	Oak Avenue Pavement Overlay	Overlay street.	\$200
MON-MAR005-MA	2nd Ave - 3rd St	Install new traffic signal or Roundabout	\$300
MON-MAR025-MA	California Extension - 8th St	Install new traffic signal or roundabout	\$1,500
MON-MAR079-MA	Salinas Ave - Reservation Rd new signal	Install new signal	\$2,000
MON-MAR132-MA	Imjin Pkwy & 4th Ave	Signalize and widen intersection	\$1,000
MON-MAR144-MA	Reservation Rd & Blanco Rd	Lane configuration improvements	\$1
MON-MAR149-MA	Cardoza Ave. & Abdy Way	Intersection Improvements (part of citywide PMP and MAR009)	\$1
MON-MAR164-MA	Reservation Rd Traffic Calming	Install traffic calming measures	\$3,000
MON-MAR168-MA	Marina Dr Drainage Improvements	Improve on existing drainage system, regrade roadway	\$200
MON-MRY019-MY	Sloat - Mark Thomas Intersection Improvements	New left turn lane and intersection improvements; install bike detection for left-turning bicyclists.	\$300
MON-MRY026-MY	Munras and Soledad	Capacity and safety improvements at Munras Avenue and Soledad Drive and Class II bikeway.	\$1
MON-MRY032-MY	Camino El Estero Roundabouts	Construct roundabouts at Camino El Estero / Franklin and Camino El Estero / Pearl	\$4,000
MON-MYC153B-UM	Corral de Tierra Road Improvements	Perform intersection improvements at Corral de Tierra and Robley Road.	\$800
MON-MYC158-UM	CVMP - Carmel Valley Road Channelization	Channelization Improvements	\$332

Table C-4e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MYC266-UM	Street Rehabilitation/Overlay	Overlay roadways.	\$20,000
MON-MYC290-UM	Countywide Local Bridge Repair and Maintenance	Unspecified countywide local bridge repair and maintenance costs.	\$25,250
MON-MYC333-UM	Pajaro Bridge and Flood Management Project	Due to Army Corps improvements on the levy system, the bridge structures may be compromised. This project would help repair the bridge structure.	\$1
MON-SEA008-SE	Kimball Ave Improvements	Roadway reconstruction, sidewalk, curb, and gutter, ADA ramps, storm sewer	\$3,000
MON-SEA022-SE	2nd Ave/Seaside Development Parcel	Construct Roundabout	\$3,500
MON-SEA023-SE	2nd Ave/1st St Improvements	New signal or roundabout and channelization	\$500
MON-SEA026-SE	Del Monte Boulevard improvements	Implement channelization and improvements at specific intersections and Del Monte Blvd	\$5,000
MON-SEA027-SE	Fremont Boulevard Signal Installation	Install signal interconnect conduit	\$500
MON-SEA030-SE	Update and Implement Pavement Management System and Maintenance	Roadway improvements to include total reconstruction and overlay	\$2,549
MON-SEA035-SE	Lightfighter & General Jim Moore Intersection Improvements	Install Roundabout	\$2,750
MON-SEA038-SE	Coe Ave Roundabout	Double roundabout at Coe & General Jim at Seaside Middle School entrance	\$4,000
MON-SEA042-SE	Fremont/Highway 1/Monterey Rd Intersection	Improvements to intersection at Fremont, Monterey Rd and Highway 1 on/off ramps. TAMC is working on a design concept that includes a double-roundabout and an underground tunnel for the continuation of the SURF! Busway corridor on the TAMC rail right-of-way.	\$25,000
MON-SEA043-SE	Gigling Road Improvements	Upgrade existing 2 lane road to include roundabout and complete street elements	\$7,000

Table C-4e: Monterey County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-SNS058-SL	Williams Road Improvements Phase 1	Construct median islands from E Alisal to Fairhaven, ADA ramps, traffic signal modifications and landscaping	\$10,000
MON-SNS288-SL	Mckinnon St/ Harden Pkwy Traffic Control	Traffic Signal or Roundabout subject to an Intersection Control Evaluation	\$800
MON-SNS289-SL	Freedom Pkwy/ Rider Ave Traffic Control	Traffic Signal or Roundabout subject to an Intersection Control Evaluation	\$800
MON-SOL047-SO	Gabilan Drive and Marin Street Intersection Improvements	Intersection improvements (2013 TIF M1); install signal	\$467
MON-SOL048-SO	Oak Street and Front Street Intersection Improvements	Intersection Improvements (2013 TIF M1); modify existing signal	\$1
MON-SOL049-SO	Front St and Nestles Rd Intersection Improvements	Intersection Improvements (2013 TIF M1); modify existing signal	\$1
MON-SOL050-SO	Moranda Rd and NB US 101 Ramps Intersection Improvements	Intersection improvements; install signal	\$467
MON-SOL051-SO	West Street and Gabilan Drive Intersection Improvements	Intersection improvements (2007 TIF X15, 2013 TIF M1)	\$467
MON-SOL052-SO	Front St and San Vicente Rd Intersection Improvements	Intersection Improvements; Add 2 Front St left turn lanes and San Vicente Rd free-right turn lane	\$720
MON-SOL054-SO	Orchard Lane and Metz Rd Intersection Improvements	Intersection Improvements (2013 TIF M1); Install signal	\$467

Table C-4f: Monterey County Other Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MAA003-MAA	Rehabilitate Taxi Lane (formerly Taxiway A)	Localized removal and reconstruction of failed areas, crack fill, seal, asphalt overlay, edge and apron lights and pavement markings	\$600
MON-MAA005-MAA	Land Acquisition	Acquire 11.4 acres for RPZ (East End: 2.8 Private Party + 6.2 County, West End: 2.4 Private Party)	\$750
MON-MAA007-MAA	Design - Runway and Parallel Taxiway A Extension to West	Runway and parallel Taxiway extension to west and apron expansion to west end	\$400
MON-MAA008-MAA	Extend Runway and Parallel Taxiway A to West	Runway and parallel taxiway extension to west and apron expansion west end	\$15,300
MON-MAA009-MAA	Apron Rehabilitation and Lighting	Crack fill, seal joints in concrete apron and install pole mounted apron lights	\$500
MON-MAA010-MAA	Apron Expansion	Construct apron area west end, approximately 400,000 sf	\$10,000
MON-MAA011-MAA	Construct Aircraft Storage Hangars	Various sizes, approximately 200,000 sf	\$31,500
MON-MAA013-MAA	Rehabilitate and Widen Runway 11-29	Construct asphalt pavement overlay, widen runway from 75 to 100 feet, new markings	\$15,150
MON-MAA014-MAA	GA Terminal Building	Construct 8,000 sf GA terminal building and reconfigure and expand access and parking	\$4,400
MON-MAA018-MAA	Rehabilitate Parallel and Connecting Taxiways	Construct asphalt pavement overlay, new markings	\$1,000
MON-MAA019-MAA	Land Acquisition - west end	Acquire 52 acres of land for west end RPZ	\$2,500
MON-MAA020-MAA	Runway Navigation Aids	Install Runway 11 ILS and MALSR and Install Runway 29 REIL's	\$4,000
MON-MAA022-MAA	North Side Access Road	Construct 24 ft wide by 12,000 ft long access road	\$7,300
MON-MAA023-MAA	North Side Parallel Taxiway and Apron	Design and construct full length parallel Taxiway B, three connecting taxiways and 100,000 square foot apron	\$11,500
MON-MAA024-MAA	Tiedown Ramp and Helipad	Construct Tiedown ramp (north of 524) and Helipad	\$1,100
MON-MAA025-MAA	West T-Hangar Drainage Improvements	Drainage Improvements (west T-Hangars)	\$80
MON-MAA026-MAA	North Side Construct Aircraft Storage Hangars	Various sizes on north side of airport, approximately 250,000 sf	\$35,000

Table C-4f: Monterey County Other Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MDR004-MDR	Electrical Improvements	Re-package, advertise and construction of Airfield Electrical Improvements	\$365
MON-MDR007-MDR	Apron Rehabilitation (Construction)	Apron Rehabilitation (Construction Only)	\$700
MON-MDR010-MDR	Drainage Improvements with Environmental Assessment (Biologist & Cultural Resources) Design Only	Drainage improvements with Environmental Assessment (Biologist and Cultural Resources) Design	\$188
MON-MDR011-MDR	Drainage Improvements East Apron (Construction)	Drainage Improvements East Apron (Construction)	\$555
MON-MDR012-MDR	Fuel Pump Reconstruction and Rehabilitation (Design)	Fuel Pump Reconstruction and Rehabilitation (Design)	\$25
MON-MDR013-MDR	Fuel Pump Reconstruction and Rehabilitation (Construction)	Fuel Pump Reconstruction and Rehabilitation	\$200
MON-MDR014-MDR	Airport Entrance Relocation	Airport entrance relocation	\$200
MON-MDR015-MDR	Rehabilitation of surface road, clear zone	Rehabilitation of surface road, clear zone	\$120
MON-MPA013-MRA	Maintenance Building	Construct new maintenance building	\$1,200
MON-MPA051-MRA	North Side GA - Construction (Phase 1 - Pavement/Site Prep)	Construct Northside General Aviation (Phase 1)	\$11,000
MON-MPA052-MRA	10R-28L Pavement Rehabilitation Treatment	Pavement Treatment to improve runways and extend/maintain its usefulness	\$1,250
MON-MPA053-MRA	ARFF Building - Design	Design ARFF Building	\$960
MON-MPA054-MRA	Northeast Service Road Improvements	Northeast Service Road improvements	\$1,946
MON-MPA055-MRA	Terminal Complex - Design (Terminal Building)	Design Terminal Building	\$6,000
MON-MPA056-MRA	Terminal Complex - Design (Roads & Surface Parking)	Design Roads and Surface Parking	\$2,647

Table C-4f: Monterey County Other Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MPA057-MRA	Terminal Complex - Construction (Aprons & Taxiways)	Construct Aprons and Taxiways	\$9,088
MON-MPA058-MRA	Taxiway A Shift Relocation	Shift Taxiway A 52.5 feet from 10R-28L centerline to enhance safety	\$1,800
MON-MPA059-MRA	ARFF Building Construction	Construct new ARFF Structure	\$5,900
MON-MPA062-MRA	Terminal Complex - Construction (Roads & Surface Parking)	Construct Roads and Surface Parking	\$12,000
MON-MPA063-MRA	Demolish Old Terminal Building	Demo Old Terminal Building	\$4,600
MON-MPA065-MRA	Reconstruction (Phase II) Northside GA Construction (Phase II)	Construct Northside GA (Phase II)	\$1
MON-MPA066-MRA	RPZ Land Acquisition (20 Acres) /Easement (10 Acres)	Acquire RPZ Lands	\$10
MON-MPA067-MRA	Extend Taxiway B to Rwy 28L Threshold	Taxiway B Extension Improvements	\$7,600
MON-SAP022-SLA	T-Hangar Taxiways (Phase II)	Construction of new taxiways-East Area hangars	\$1,746
MON-SAP023-SLA	VORTAC Relocation	Relocation of VORTAC off-airport	\$972
MON-SAP027-SLA	East Area Development	Construction of East Area infrastructure	\$3,500
MON-SAP028-SLA	Miscellaneous	Placement of reflectors, directional signs, various locations on airport	\$52
MON-SAP029-SLA	Aviation Easement Acquisition; RPZ	Acquisition of aviation easements for Rwy 8, Rwy13 Runway Protection Zones	\$30
MON-SAP030-SLA	T-Hangar Taxiways (Phase I)	Engineering for new taxiways-East Area	\$300
MON-SAP031-SLA	North -Hangar Twy Reconstruction (Phase I)	Engineering for reconstruction of all taxiways in the North Area of the Airport	\$47

Table C-4f: Monterey County Other Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-SAP032-SLA	North T-Hangar Utilities Reconstruction (Phase I)	Engineering for replacement of water, sewer, storm water facilities in the North Area of the Airport	\$25
MON-SAP033-SLA	Airport Gate/Fencing Upgrades (Phase II)	Engineering for four emergency generators for airport access gates	\$36
MON-SAP034-SLA	North T-Hangar Taxiway Reconstruction (Phase II)	Reconstruction of all taxiways in Airport North Area (construction)	\$203
MON-SAP035-SLA	North T-Hangar Utilities Reconstruction (Phase II)	Reconstruct North T-Hangar water, sewer, storm water facilities (construction)	\$120
MON-SAP036-SLA	Airport Gate/Fencing Upgrades (Phase III)	Construction of additional emergency generators for airport access gates	\$163
MON-SAP038-SLA	Runway Safety Area/Design Stds Study	Runway Safety Area/Design Standards Study	\$154
MON-SAP042-SLA	East Side Improvements	Access, taxiway and related infrastructure	\$4,800
MON-SAP043-SLA	Master Plan	Perform airport master plan	\$430,000

Table C-4g: Monterey County Transit Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MRY031-MY	Del Monte Transit Stop Enhancement	Add amenities to bus stops such as shelter, traveler information, benches, trash cans and pedestrian-scale lighting.	\$1
MON-MRY-29-MY	Downtown Monterey Multimodal Transit Center	Plan and construct a multimodal transit center in downtown Monterey.	\$1
MON-MST019-MST	Highway 68 Corridor Transit Improvements	Highway 68 Corridor Transit Improvements	\$15,000
MON-MST020-MST	Salinas Bus Rapid Transit	Construct Bus Rapid Transit improvements along North Main Street.	\$15,000
MON-PGV024-PG	Forest Ave Transit Stop Enhancement and Access	Install transit amenities at stops along Forest Ave	\$1
MON-SEA-036-SE	High Quality Transit Station	Transit Plaza; proposed decorative paver walkway and LRT station platform w/bike lockers.	\$1
MON-TAMC001-TAMC	Monterey Branch Line Light Rail- Phase 1	Provide light rail transit service using the existing 16-mile Monterey Branch Line between Monterey and Castroville adjacent to Highway 1. Phase 1 includes reconstruction of tracks, construction of stations.	\$145,000
MON-TAMC002-TAMC	Monterey Branch Line Light Rail - Salinas River Bridge Replacement - Phase 2	Build new rail bridge on the Monterey Branch Line over the Salinas River and reconstruct tracks to connect to the planned commuter rail station in Castroville.	\$125,000
MON-TAMC004-TAMC	Coast Rail Service	Build new train station at Soledad and King City and acquire equipment to run passenger rail service on main line. Includes bi-hourly service on main line. (Related to constrained King City Multimodal Station-KCY052)	\$482,000
MON-TAMC019-TAMC	Around the Bay Rail	Construct Around the Bay Rail project- Monterey to Santa Cruz. Identified in the Monterey Bay Area Rail Network Integration Study. Includes 4 rail stations. Related rail projects include TAMC001, TAMC002, TAMC014 and TAMC015.	\$400,000

Table C-4h: Monterey County Transit Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MST009-MST	Operations & Maintenance Facilities	Maintenance and Operations Facilities including: \$12M Measure X for Salinas Maintenance & Ops Facility & \$10.3M Measure X for S County Maintenance & Ops Facility (under construction, estimated to be completed in late 2021 or early 2022)	\$50,000
MON-MST010-MST	Bus Replacement and Zero Emission Bus Infrastructure	Combining MON-MST001-MST and MON-MST010-MST and MON-MST013-MST	\$149,500
MON-MST013-MST	Zero Emission Buses and Infrastructure	Electrification and/or fuel cell technology vehicles and infrastructure	\$149,500

Table C-4i: Monterey County Transportation System Management Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
MON-MRY015-MY	Traffic Signal Operational Improvements to Pacific, Franklin and Munras Corridors	Install traffic signal adaptive system and upgrade signal infrastructure	\$2,618
MON-SEA020-SE	1st Ave/Lightfighter Dr. Improvements	Construct roundabout	\$4,500

Table C-5a: San Benito County Active Transportation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SB-SBC-A89	Buena Vista Traffic Calming Project	Physical design and other measures put in place on existing roads to reduce vehicle speeds and improve safety for pedestrians and cyclists.	\$1
SB-SJB-A21	San Juan Bautista Historic Park Bike Lane	Class I, multi-use path, .29 miles, Franklin Street to 1st Street.	\$300
SB-SJB-A22	Monterey Street Bike Route	Class III, 1.04 miles, 4th Street to North side of San Juan Bautista Historic Park.	\$75

Table C-5b: San Benito County Highway Improvements Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SB-CT-A55	U.S. 101: Las Aromitas: Monterey/San Benito County Line to State Route 156	Convert to 6 lanes from Monterey/San Benito County line to SR 156 in San Benito County.	\$50,000
SB-CT-A56	U.S. 101: SR 156 to SR 129	PLACEHOLDER;Convert to 6 lanes and upgrade facility to freeway standards.	\$1
SB-SBC-A90	Rocks Road US 101 Wildlife Connectivity Project	The project will identify wildlife crossing opportunities along US 101 in San Benito County in the Aromas Hills between postmile 0.0 and 2.8 to connect important habitat on both sides of the highway and improve safety for drivers and wildlife.	\$12,600

Table C-5c: San Benito County Local Street & Road Improvements Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SB-COH-A57	Pacific Way (New Road): San Felipe Road to Memorial Drive	New 2-lane road from San Felipe Road to future Memorial Drive north extension with bicycle lanes. TIF	\$7,412
SB-SBC-A14	San Benito Regional Park Access Road	Construct new 2-lane roadway from Nash Road to San Benito Street.	\$403
SB-SBC-A91	Memorial Drive South Extension (Santa Ana to Meridian)	Extend Memorial Drive between Santa Ana Road and Meridian Street	\$1

Table C-5d: San Benito County Local Street and Road Operational, Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SB-SBC-A100	San Benito St -Nash to Union with intersection control		\$2,512
SB-SBC-A101	Cienega Rd - Mudstone Ranch to Bird Creek		\$858
SB-SBC-A101	Barrier Rail Replacement - HSIP		\$1,014
SB-SBC-A58	Rocks Road Bridge	Rocks Road over Pinacate Rock Creek, East Little Merrill Road. Replace 1-lane bridge with 2-lane bridge. Bridge No. 43C0053. HBP	\$960
SB-SBC-A77	San Benito County Local Street & Roadway Maintenance: 2020-2045	System preservation and maintenance.	\$173,687
SB-SBC-A88	Carr Avenue Bridge Project	Potential bridge replacement. The bridge is located on Carr Avenue, 0.23 miles east from Carpenteria Road intersection.	\$1,243
SB-SBC-A92	San Felipe Beautification Plan (Hwy 25 to Hwy 156)	Enhance, rehabilitate, restore, or install measures to beautify and improve public spaces and mitigate the urban heat island effect.	\$1
SB-SBC-A93	San Felipe Gateway Corridor	Physical design and other measures put in place on existing roads to reduce vehicle speeds and improve safety for pedestrians and cyclists	\$1
SB-SBC-A94	Union Rd Low Spot Drainage		\$170
SB-SBC-A95	Fairview/Acquistospace/ Comstock Intersection		\$2,755
SB-SBC-A96	Shore Rd/Frazier Lake Intersection		\$3,185
SB-SBC-A97	Shore Rd Bridge over Tequisquito - Fndn Repair		\$2,300
SB-SBC-A98	New Idria Rd - Emergency Crossing Repair		\$2,890
SB-SBC-A99	Cienega Rd Bridge at Bird Creek Replacement		\$1,850

Table C-5e: San Benito County Transit Improvements Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SB-LTA-A53	Passenger Rail to Santa Clara County	Commuter rail from Hollister to Gilroy	\$44,883

Table C-6a: Santa Cruz County Active Transportation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CAP-P03-CAP	Upper Capitola Avenue Improvements	Installation of bike lanes and sidewalks on Capitola Avenue (Bay Avenue - SR 1) and sidewalks on Hill Street from Bay Avenue to Rosedale Avenue.	\$840
SC-CAP-P04b-CAP	Capitola Village Multimodal Enhancements - Phase 2/3	Multimodal enhancements in Capitola Village along Stockton Avenue, Esplanade, San Jose Avenue & Monterey Avenue. Includes sidewalks, bike lanes, bike lockers, landscaping, improve transit facilities, parking, pavement rehab and drainage.	\$3,100
SC-CAP-P16-CAP	Clares Street Pedestrian Crossing	Construct signalized ped crossing 0.20 miles west of 40th Avenue.	\$270
SC-CAP-P43-CAP	Clares Street/41st Avenue Bicycle Intersection Improvement	Bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) at Clares across 41st Avenue.	\$100
SC-CAP-P44-CAP	Gross/41st Avenue Bicycle Intersection Improvement	Bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) from Gross E/B to 41st N/B.	\$100
SC-CAP-P51-CAP	Citywide Sidewalk Program	Install sidewalks to fill gaps. Annual Cost \$50k/yr.	\$500
SC-CAP-P52-CAP	Citywide Bike Projects	Bike projects based on needs identified through the Bicycle Plan. These projects are in addition to projects listed individually in the RTP.	\$630
SC-CO-P103-USC	East Cliff Dr Pedestrian Pathway (17th-Palisades Ave)	Construct sidewalks and bike lanes on East Cliff where there are gaps	\$7,000
SC-CO-P108-USC	Glen Arbor Sidewalk	Construct sidewalk, ADA ramps, crosswalks, drainage improvements and streetlights on northbound Glen Arbor Road from Pine Street to Highway 9	\$1,500
SC-CO-P38-USC	Pajaro River Bike Path System	Construction of a Class 1 bike path along the levees and a Class 2 bikeway on Thurwatcher Road and Beach Road.	\$7,000
SC-CO-P40-USC	Glen Coolidge Drive/Hwy 9 Bike Path	Class 1 bike facility from Glen Coolidge Drive to Hwy 9 to provide eastern access to UCSC.	\$2,380
SC-CO-P41-USC	Countywide Sidewalks	Install sidewalks.	\$65,310
SC-CO-P46-USC	San Lorenzo River Valley Trail	15 mile, paved multi-use path for bicyclists and pedestrians from Boulder Creek to Santa Cruz.	\$25,830

Table C-6a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-P68-USC	Thurwachter Road Bike Lanes	Install bicycle lanes.	\$50
SC-CO-P77-USC	East Cliff (26th to Moran Way) Sidewalk Improvement	Install sidewalk from 26th south to link to Moran Way.	\$410
SC-CO-P78-USC	26th to 30th (at Lode/Quartz) Bike/Ped Connection	New bike/ped connection from Lode and Quartz to Moran Trail, which connects to 30th.	\$520
SC-CT-P07a-VAR	Hwy 1 Bike/Ped Bridge (Cabrillo-New Brighton)	Construction of bike/ped bridge connecting New Brighton State Beach and Cabrillo College as part of larger Nisene SP to the Sea trail concept. Lead agency TBD.	\$14,000
SC-CT-P38-WAT	Main St/Beach St/Lake Ave Bike Facilities	Bicycle facilities - Main St (GV Road to Monterey County line), Beach Street (Walker to Lincoln) and Lake Avenue (Main Street to fairgrounds). County/City Project - Cost unknown.	\$1
SC-CT-P39-WAT	Riverside (Hwy 129) Bike Facilities	Bicycle facilities - Lee to Lakeview Road. County/City Project -Cost Unknown.	\$1
SC-EA-02-USC	Ecology Action Countywide SRTS Youth Pedestrian and Bicycle Safety Education	EA will serve approximately 120 second grade classrooms with ?feet on the ground? pedestrian safety education and 88 fifth grade classrooms with bike safety education and ?rodeos? serving a total of 44 local schools.	\$7,920
SC-MTD-P23-MTD	Bike Station at Capitola Mall	Establish bike station at Capitola Mall, especially to serve UCSC. Would be joint mall, UCSC, MTD project.	\$1,030
SC-MTD-P49-MTD	Pacific Station Bike Station	Establish bike station at Pacific Station.	\$410
SC-RTC 27a-RTC	Monterey Bay Sanctuary Scenic Trail Network - Design, Environmental Clearance, and Construction	Design, environmental clearance and construction of the 32-mile rail component of the 50+ mile network of bicycle and pedestrian facilities on or near the coast, with the rail trail as the spine and additional spur trails to connect to key destinations. (Funded segments listed individually.)	\$121,000

Table C-6a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-RTC-16-RTC	Bike Parking Subsidy Program	Subsidies for bicycle racks and lockers for businesses, schools, government agencies, and non-profit organizations are all eligible. Recipients are responsible for installation and maintenance of the equipment. Avg annual cost: \$25K/yr.	\$390
SC-RTC-P26-VAR	Countywide Pedestrian Signal Upgrades	Grant program to fund installation of accessible pedestrian equipment with locator tones including rapid flashing beacons and count down times etc. to facilitate roadway crossings by visually and mobility impaired persons.	\$1,035
SC-SC-P09-SCR	Sidewalk Program	Install and maintain sidewalks and access ramps.	\$15,160
SC-SC-P107-SCR	Arroyo Seco Trail (Medar Street to Grandview Street)	Pave exiting gravel trail and widen and pave connection to Grandview Street.	\$500
SC-SC-P120-SCR	Ocean St and San Lorenzo River Levee Bike/Ped Connections (Felker, Kennan, Blain, Barson Streets)	Improve pedestrian and bicycle facilities on side streets to connect Ocean Street with San Lorenzo River Levee path system.	\$620
SC-SC-P124-SCR	Ocean Street/San Lorenzo River Levee Area Wayfinding	Install signage on the bike/ped scale to bike/ped facilities connecting key destinations.	\$150
SC-SC-P125-SCR	Citywide Safe Routes to School Projects - ATP	Projects to improve pedestrian and bicycle safety near schools.	\$6,800
SC-SC-P132-SCR	Swanton Blvd Multi-Use Trail Connector	Install a 10-12 foot wide multi-use trail along Swanton, Delaware and Natural bridges, completing a missing link.	\$1,900
SC-SC-P133-SCR	San Lorenzo River Walk Lighting	Install pedestrian scale lighting on the Riverwalk. The San Lorenzo Riverwalk Lighting northern section, is funded in the amount of \$970,000 from an ATP grant. There still a need for another \$1M for the southern reach unconstrained.	\$1,000
SC-SC-P134-SC	Ocean-Plymouth Multi-modal Transportation Improvements	Improve the bike and pedestrian connections through the intersection.	\$1,800

Table C-6a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-SC-P21-SCR	Brookwood Drive Bike and Pedestrian Path	Provide 2-way bicycle and pedestrian travel.	\$1,030
SC-SC-P22-SCR	Chestnut Street Pathway	Install a Class 1 bicycle/pedestrian facility to connect the east side of Neary Lagoon Park with the Depot Park path.	\$570
SC-SC-P30-SCR	Murray Street to Harbor Path Connection	Install a Class 1 bicycle/pedestrian facility to connect the Segment 9 Rail Trail project, for the east and west side of the harbor.	\$790
SC-SC-P47-SCR	Chestnut Street Bike Lanes	Install Class 2 bike lanes to provide connection from existing bike lanes on Laurel Street and upper Chestnut Street to proposed Class 1 bike path connections to Bay Street and Pacific Avenue/Beach Street.	\$100
SC-SC-P75-SCR	Lump Sum Bike Projects	Bike projects based on needs identified through the Active Transportation Plan and Santa Cruz City Schools Complete Streets Master Plan. These are in addition to projects listed individually in the RTP.	\$6,800
SC-SC-P95-SCR	Branciforte Creek Pedestrian Path Connections	Fill gaps in pedestrian and bike paths along and across Branciforte Creek in the Ocean-Lee-Market-May Streets area.	\$3,410
SC-SV-P05-SCV	Citywide Sidewalk Program	Install sidewalks to fill gaps. Annual Cost \$50k/yr.	\$1,600
SC-SV-P29-SCV	Glen Canyon Road Bike Lanes	Class 2 Bike lanes from Flora Lane to Green Hills.	\$1,030
SC-SV-P33-SCV	Civic Center Drive Bike Lanes	Add bike lanes to narrow road.	\$410
SC-SV-P34-SCV	N. Navarra Drive-Sucinto Drive Bike Lanes	Add bike lanes to developing area behind commercial.	\$620
SC-SV-P36-SCV	El Rancho Drive Bike Lanes	Add bike lanes on El Rancho within city limits.	\$340
SC-SV-P37-SCV	Lockhart Gulch Road Bike Lanes	Add Class 2 bike lanes to narrow, primarily residential street.	\$720
SC-SV-P41-SCV	Citywide Bike Lanes	Construction of additional bike lanes and paths citywide (including Green Hills).	\$1,300

Table C-6a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-SV-P49-SCV	Mt Hermon Road and Scotts Valley Drive - Crosswalks	Increase number of crosswalks on Mt Hermon/Scotts Valley Dr, update crosswalks to block pattern, add pedestrian treatments where necessary at intersections to decrease distance across using refuge islands. Add crosswalks to all sides of intersections (particularly an issue on Scotts Valley Dr). Add HAWK signals to provide a low delay signalized crossing opportunity at select locations. Examples include the Safeway Driveway on Mt. Hermon Rd, at Victor Square/Scotts Valley Dr., and at Tramell Way/Scotts Valley Dr.	\$515
SC-SV-P55-SCV	Bean Creek Rd at Bluebonnet Traffic Circle	Install traffic circle to slow traffic and improve visibility of crosswalk. Source ATP Plan	\$300
SC-SV-P57-SCV	Bean Creek Rd Traffic Calming and Sidewalk Upgrades	Install traffic calming measures and upgrade to standard sidewalk on east side of the street. Study options to install Class I facility on east side of the street. Source ATP Plan	\$650
SC-SV-P58-SCV	Bluebonnet Lane Separated Bikeway	Install raised cycletrack or Class IV separated bikeway to narrow travel lanes and decrease pedestrian crossing distance. Source ATP Plan	\$290
SC-SV-P59-SCV	Bluebonnet Lane at Monteville Crosswalk Improvements	Install high-visibility raised crosswalk. Source ATP Plan	\$25
SC-SV-P60-SCV	Carbonera Creek Multi-Use Path	Study options to install multi-use path connecting parks along Carbonera Creek. Source ATP Plan	\$300
SC-SV-P61-SCV	Upgrade Bicycle Sharrows	Upgrade all white sharrows in City limits to green backed sharrows. Source ATP Plan	\$12
SC-SV-P62-SCV	In-Street Pedestrian Crossing Improvements	Install in-street pedestrian crossing signs (R1-6) at uncontrolled crossings near schools, parks, and other areas with high pedestrian traffic. Source ATP Plan	\$5
SC-SV-P63-SCV	Citywide Bicycle Detection at Intersections	Install bicycle detection at intersections: either in-ground detection loops, video detection, or bicycle push-buttons. If in-ground detection loops are used, used bike symbol to show cyclists where to position themselves. Source ATP Plan	\$380

Table C-6a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-SV-P64-SCV	Citywide Crosswalk Improvements	Upgrade crosswalks near schools to high visibility. Source SRTS Plan	\$70
SC-SV-P65-SCV	Bean Creek Rd/Camp Evers Connection	Pave (asphalt or concrete) existing dirt paths on Bean Creek Rd. Source SRTS Plan	\$21
SC-SV-P66-SCV	El Pueblo Rd Sidewalk Connections	Fill sidewalk gaps and install pedestrian-scale lighting. Source ATP Plan	\$950
SC-SV-P67-SCV	Erba Lane/ MacDorsa Sidewalk Connection	Install pedestrian pathway/sidewalk between Erba Lane and MacDorsa Park. Source Parks Master Plan	\$200
SC-SV-P68-SCV	Erba Lane Sidewalk Connection	Install sidewalk between Scotts Valley Drive and fire station. Source ATP Plan	\$85
SC-SV-P69-SCV	Glen Canyon Rd at Hwy 17 Overpass Pedestrian Bridge	Study options to install pedestrian pathway under freeway bridge. Source ATP Plan	\$100
SC-SV-P70-SCV	Glenwood Dr/Meadow View Dr Intersection Improvements	Install curb extensions to shorten crossing distance. Upgrade crosswalks to high visibility and install LED flashing stop signs. Source SRTS Plan	\$117
SC-SV-P71-SCV	Glendwood Dr Bicycle Improvements	Add buffers and keep bike lanes at 5' by narrowing travel lanes to 11' and/or expanding right of way. Source SRTS Plan	\$103
SC-SV-P72-SCV	Granite Creek Rd Overpass Bike/Ped Modifications	Study options to rebuild overpass to widen sidewalks and install Class IV separated bikeways. Install pedestrian-scale lighting (long term). Source ATP Plan	\$200
SC-SV-P73-SCV	Granite Creek Rd Overpass Bike Improvements	Narrow travel lanes to widen shoulders or add bike lanes. At the intersection of Granite Creek Road and Scotts Valley Drive, install bike lanes in both directions, sharrows in the right turn lane, and a bicycle box to allow access to the left turn lane. At the intersection of Granite Creek Road at Santa's Village Road/Highway 17, install a through bike lane for cyclists traveling to Santa's Village Road and sharrows in the right turn lane. At both intersections, install dashed green lane treatments where bike lane crosses the right turn lane (short term). Source ATP Plan	\$50

Table C-6a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-SV-P75-SCV	Kings Village Rd Bike/Ped Connection	Install bike/pedestrian connection between potential new development at 440 Kings Village Road and Town Center property. Source ATP Plan	\$95
SC-SV-P76-SCV	Kings Village Rd Crosswalk Improvements	Upgrade all crosswalks to high visibility. Install curb extensions to shorten crosswalks where feasible. Source ATP Plan	\$370
SC-SV-P77-SCV	La Madrona Dr Bike/ Ped Improvements	Install pedestrian improvements on La Madrona Drive between project site and Mount Hermon Road, when Gateway South project developed. Restripe bike lanes and continue northbound bike lane to intersection of Mount Hermon Road. Install dashed green lane treatments where bike lane crosses right turn lane. Source ATP Plan	\$200
SC-SV-P78-SCV	Lockwood Lane Multi- Use Path	Install Class I multi-use path between Mount Hermon Road and Whispering Pines Drive. (long term) Source ATP Plan	\$1,300
SC-SV-P80-SCV	Citywide Pedestrian Signals	Install pedestrian countdown signal heads at all signalized intersections. Source ATP Plan	\$120
SC-SV-P81-SCV	Lockhart Gulch Road Multi-Use Path	Study options to install multi-use path between Lockhart Gulch or Green Valley Road and Coast Range Road, including an unpaved pathway. Source ATP Plan	\$25
SC-SV-P82-SCV	Mt Hermon Rd Bike & Ped Improvements	Install bike and pedestrian improvements including filling sidewalk gaps, high-visibility crosswalks, green bike lane treatments, and curb radius reduction. Source ATP Plan	\$800
SC-SV-P83-SCV	Mt Hermon Rd Buffered Bike Lanes	Explore installation of buffered bike lanes or Class IV separated bikeways by narrowing lane widths to 11', as recommended in Town Center Plan, or through plan lines study to gain additional ROW as properties redevelop. Source ATP Plan	\$190
SC-SV-P84-SCV	N. Navarra Dr Bike/Ped Access	Reconfigure gate to Sucinto Lane to allow for bike/pedestrian access. Source Parks Master Plan	\$50

Table C-6a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-SV-P85-SCV	Navarra Dr Sharrows & Wayfinding	Install green backed sharrows on N. Navarra Dr. Install bike wayfinding signage on S. Navarra Dr. to highlight Green Hills Road connection. Source ATP Plan	\$4
SC-SV-P86-SCV	Quien Sabe Rd Sidewalk	Install sidewalk on one side of the street between Scotts Valley Drive and Oak Creek Boulevard. Source ATP Plan	\$100
SC-SV-P87-SCV	Sandraya Heights Rd Crossing Improvements	Install curb extension on northwest corner to shorten crossing. Install high-visibility crosswalk. Source SRTS Plan (long term)	\$53
SC-SV-P88-SCV	Santa's Village Rd Sidewalk Improvements	Widen sidewalk to Class I multi-use path to connect new housing developments with Granite Creek Road. Source ATP Plan	\$400
SC-SV-P89-SCV	Scotts Valley Drive at Bean Creek Road Crossing Improvements	Install high visibility crosswalks, curb extensions and median refuge islands. Install lead pedestrian interval. Study options to eliminate or modify southbound right-turn lane approaching Bean Creek Road to reduce crossing distance. Source SRTS Plan	\$150
SC-SV-P90-SCV	Scotts Valley Drive at Mount Hermon Road Lane Modifications	Study options to redesign or modify right-turn slip lanes to improve pedestrian visibility. Source ATP Plan	\$30
SC-SV-P91-SCV	Scotts Valley Dr at Victor Square Crosswalk/Sidewalk Improvements	Add new marked crosswalk at north leg of intersection or relocate crosswalk to north leg to reduce vehicle/pedestrian conflicts. Install pedestrian countdown signal heads. Install sidewalk on Victor Square between Scotts Valley Drive and shopping center entrance. Source ATP Plan	\$40
SC-SV-P92-SCV	Scotts Valley Dr Lane Modifications/Pedestrian Crossing Improvements	Reduce lane widths or reduce to one lane in each direction to reduce pedestrian crossing distance and provide wider sidewalk, landscape strip and/or buffered bike lanes or Class IV separated bikeway. Source ATP Plan and SRTS Plan	\$516
SC-SV-P94-SCV	Highway 17 On/Off Ramp Modernization & Redesign	Begin discussions with Caltrans about modernizing freeway on- and off-ramps. Long term: Study options to redesign intersection. Source ATP Plan	\$100

Table C-6a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-SV-P96-SCV	Siltanen Community Park Connector Paths	Improve paths to school campus. Source SRTS Plan. Cost TBD.	\$1
SC-SV-P97-SCV	Skypark Bicycle Improvements	Widen path to allow for bike and pedestrian access, or install separate path for bicyclists to connect Skypark Drive and Kings Village Road. Source ATP Plan. Cost TBD.	\$1
SC-SV-P98-SCV	Vine Hill School Rd Sidewalk Improvements	Fill sidewalk gaps on north/ east side of street. Source ATP Plan	\$250
SC-UC-P10-UC	Hagar/McLaughlin Intersection Improvements	Signal, pedestrian safety improvements (including new crosswalk) and roadway improvements.	\$520
SC-UC-P30-UC	McLaughlin Drive Bike Lanes/Pedestrian Enhancements	Install Class 2 bike lanes and enhance pedestrian circulation on University campus roadway.	\$2,580
SC-UC-P34-UC	Spring Street Bikeway	Construct bikeway connecting Spring Street to Hagar Court.	\$310
SC-UC-P36-UC	Porter/Performing Arts Pedestrian Bridge	Construct pedestrian bridge.	\$1,030
SC-UC-P37-UC	College Nine/Crown College Pedestrian Bridge	Construct pedestrian bridge.	\$1,550
SC-UC-P39-UC	College Nine/Communications Pedestrian Bridge	Construct pedestrian bridge.	\$1,030
SC-UC-P40-UC	Science Hill/North Academic Core Pedestrian Bridge	Construct pedestrian bridge.	\$1,030
SC-UC-P50-UC	Sidewalk/Pedestrian Improvements	Widen sidewalks/improve ped access in areas of campus.	\$5,170
SC-UC-P55-UC	UCSC Bicycle Facilities	Add bicycle facilities on campus roadways and paths. Lump sum of projects, including but not limited to UCSC Bicycle Plan that are not listed individually elsewhere in the RTP.	\$1,030
SC-UC-P56-UC	Heller Drive Bicycle Lanes (Empire Grade to Porter College)	Add Class II bicycle lanes in downhill direction as feasible.	\$830
SC-UC-P72-UC	Kerr/Porter Road Pedestrian Bridge ADA Upgrades	Modify bridge to improve access.	\$3,100

Table C-6a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-VAR-P28-VAR	Complete Streets Area Plan	Detailed complete street circulation and design plans, including consideration of multimodal green travelways, for areas identified for intensified development in Sustainable Communities Strategy.	\$1,600
SC-VAR-P31-VAR	Uncontrolled Pedestrian Crossing Improvements	Implement improvements to uncontrolled pedestrian crossing such as painted and/or raised crosswalks, flashing beacons and pedestrian islands.	\$2,600
SC-VAR-P33-VAR	Neighborhood Greenways	Implement greenways which gives priority to bicycles and pedestrians on low volume, low speed streets including, way finding and pavement markings, bicycle treatments in areas identified for more intensified development in Sustainable Communities Strategy.	\$5,170
SC-VAR-P44-VAR	Electric Bicycle Commuter Incentive Program	Financial incentives, promotion and/or education to encourage residents to use electric bikes instead of commuting by car.	\$2,730
SC-WAT-P15-WAT	Citywide Pedestrian Facilities	Construct sidewalks and curb ramps where necessary. This work is usually combined with the annual road rehabilitation and maintenance projects. Avg annual cost: \$100/yr.	\$2,380
SC-WAT-P19-WAT	Lump Sum Bicycle Projects	Update the City Bicycle Plan and construction of additional routes and paths (250k/yr).	\$3,125
SC-WAT-P42-WAT	Pajaro Valley High School Connector Trail	Install bicycle/pedestrian trail (this trail connects Pajaro Valley High School to Airport Boulevard).	\$710
SC-WAT-P51-WAT	Rodriguez Street (Main Street to Riverside)-Buffered Bike Lane	Evaluate and if found necessary, improve bike lane striping, add buffered lanes on Rodriguez Street to delineate bike lane from vehicle parking and traffic.	\$12
SC-WAT-P52-WAT	Union/Brennan (Freedom to Riverside) - Sharrows	Evaluate and if found necessary, add sharrows to Union/Brennan.	\$12
SC-WAT-P53-WAT	Kearney/Rodriguez - Ped Crossing	Evaluate and if found necessary, add pedestrian crossing at Kearney and Rodriguez with traffic calming for access to Radcliffe Elementary.	\$35

Table C-6a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-WAT-P55-WAT	Main/Rodriguez/Union / Brennan (Freedom to Riverside) - Crosswalks	Evaluate and if found necessary, increase the number of crosswalks on Main Street, Rodriguez, and Union/Brennan to aim for 300 ft distance between crossings. Update pattern of crosswalks to block pattern.	\$115
SC-WAT-P57-WAT	East Lake/Madison - Ped Crossing	Evaluate and if feasible, add pedestrian crossing (HAWK signal if ped volume warrants) at E Lake & Madison for better access to Hall Middle School.	\$1
SC-WAT-P58-WAT	Main Street (Freedom to Riverside) Ped/Bike Enhancements	Evaluate and if feasible improve ped facilities and bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) and bike boxes and bicycle priority at intersections on Main Street intersections.	\$890
SC-WAT-P60-WAT	Hillside Avenue to Freedom Boulevard Ped/Bike Connection	Evaluate and if feasible, install new bike/ped connection from Carey Avenue to Freedom Boulevard between Roache Road and Green Valley Road to connect neighborhood to goods, services and transit on Freedom Boulevard. Include new crossing from new bicycle/pedestrian facility to east side of Freedom Boulevard.	\$360
SC-WAT-P63-WAT	Pajaro Lane to Freedom Boulevard Ped/Bike Connection	Evaluate and if feasible, new bike/ped connection from Pajaro Lane to Freedom Boulevard to connect neighborhood to goods, services and transit on Freedom Boulevard. Include new crossing from new bicycle/pedestrian facility to west side of Freedom Boulevard.	\$360
SC-WAT-P64-WAT	Freedom Boulevard/Green Valley Road Neighborhood Bike/Ped Connections	Evaluate and if feasible, implement greenway, which gives priority to bicycles and pedestrians on low volume, low speed streets including, pedestrian facilities, way finding and pavement markings, bicycle treatments to connect neighborhoods to goods and services on Freedom Boulevard.	\$1,800
SC-WAT-P70-WAT	Pennsylvania Drive (Green Valley Road to Clifford Avenue)	Repair, reconstruct and/or upgrade pavement, bike lanes, sidewalks, transit facilities, signage and striping	\$4,600

Table C-6a: Santa Cruz County Active Transportation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-WAT-P71-WAT	MBSST (Coastal Rail Trail) - Walker Street (Watsonville Slough Trailhead to Walker Street)	Construction of 2400-foot long pathway parallel to the railroad tracks. Path shall be twelve-foot width asphalt (hma). Modify drainage facilities east of Ohlone Parkway. Provide connection with Watsonville Slough Trail. Install at grade crossing at spur near Walker Street. Modify existing parking area and pedestrian facilities at Walker St/West Beach St intersection.	\$2,760
SC-WAT-P73-WAT	Main Street Modifications (East Lake Avenue to Freedom Boulevard)	Provide complete streets improvements including but not limited to pedestrian crossings, bicycle facilities, bus stops, parking, sidewalks and traffic management.	\$1,000
SC-WAT-P75-WAT	Complete Streets - Downtown	Provide complete streets improvements including sidewalk, parking, bike lane, sharrows, curb bulb outs, high visibility crosswalks, striping, signage, street trees, pedestrian lighting, bus shelters, bike parking and benches	\$22,000
SC-WAT-P76-WAT	Complete Streets - Watsonville Schools	Provide complete streets improvements including sidewalk, bike lane, sharrows, curb bulb outs, high visibility crosswalks, striping, signage and pedestrian lighting.	\$16,600
SC-WAT-P81-WAT	Lee Rd Trail	Prepare environmental documents and construction plans, secure permits	\$19,300
SC-WAT-P82-WAT	Lincoln St Safety Improvements	Pedestrian Crossing Enhancements that incorporate bulbouts, landscaping, lighting, decorative pedestrian scale fencing, enhanced crosswalks, improved sidewalks and pedestrian amenities, fencing, artistic enhancements by high school artists and classes in crossings and on lighting. Also includes bicycle racks, pavement sharrows, and signage.	\$600
TRL 05cSC	Yellowbank/Panther Beach parking lot bicycle/pedestrian overcrossing	Construction of a bicycle and pedestrian crossing of the rail line and Hwy 1 to provide access to the North Coast Rail Trail (NCRT) at formalized Yellowbank/Panther Beach with connections to Cotoni Coast Diaries.	\$2,000

Table C-6b Santa Cruz County Highway Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
RTC 24SC	97 - Hwy 1: HOV Lanes from San Andreas Rd/Larkin Valley to Morrissey Blvd	Construct HOV or Carpool lanes on Highway 1 from San Andreas Rd/Larkin Valley Rd to Morrissey Blvd, including auxiliary lanes, reconstruction of interchanges with enhanced bike and pedestrian facilities, arterial and ramp modifications to allow ramp metering, a new bike/ped crossing at Trevethan, and traffic operation system (TOS) element. [Cost if built in entirety: \$603M. See stand alone projects (RTC24-series) for estimated cost of incremental implementation.] Caltrans Project ID 05-0C730	\$1
SC-CT-P53-CT	Hwy 17 Access Management - Old Santa Cruz Hwy Area Grade Separation Concept	New structure providing grade-separation to facilitate crossing and turnaround.	\$40,000
SC-RTC-24k-RTC	95 - Hwy 1: Reconstruct Remaining Interchanges	Interchange modifications not identified as separate projects (San Andreas Rd/Larkin Valley Rd, Freedom Blvd, Rio Del Mar Blvd, State Park Dr, and Park Ave) , including reconfiguration of ramps and local streets for ramp meters, enhanced pedestrian and bike treatments (such as buffered or painted facilities) in each direction and sufficient width to allow addition of HOV lanes. [Part of the Highway 1 CIP project (RTC 24a), but is listed here as a standalone project.]	\$127,200
SC-RTC-24m-RTC	96 - Hwy 1: Construction of HOV Lanes from San Andreas Rd/Larkin Valley Rd to Morrissey Blvd	Construction of High Occupancy Vehicle (HOV or Carpool) Lanes on Highway 1 from San Andreas Rd/Larkin Valley Rd to Morrissey Blvd. Cost excludes auxiliary lanes, reconstruction of interchanges for ramp metering, over and under crossings, and traffic operation system (TOS) elements on the corridor. [These costs are listed separately (RTC 24 a,e,f,g,h,i,j, m,n,o, p,q,r). Could be expensed under a complete Hwy 1 HOV Lane project (RTC 24, \$603,000) but currently expensed as a standalone project.]	\$61,980
SC-SC-P108-SCR	Hwy 1 - Harvey West Area Alternative Access	Development of an on/off ramp from NB Highway 1 to Harvey West Boulevard/Evergreen Street, to improve access, especially during peak congestion times and emergencies.	\$4,130

Table C-6b: Santa Cruz County Highway Improvement Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-SV-P01-SCV	Hwy 17/Midtown Interchange	Construct new SR 17 interchange midway between Mt. Hermon Road and Granite Creek Road. Will require right-of-way.	\$30,990

Table C-6c: Santa Cruz County Highway Operations, Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CT-34-CT	Scotts Creek Coastal Resiliency Project	Replacement of bridge, road fill removal, and associated infrastructure to re-establish marsh/estuarine system currently restricted by Highway 1, benefiting multiple threatened and endangered species and resulting in a more resilient ecosystem and transportation corridor. Anticipated to be funded in-part by environmental resource/water grants. Partnership with Caltrans, CDF&W, RTC, RCD, Coastal Conservancy, and others.	\$96,470
SC-CT-P45-CT	State Highway Preservation (bridge, roadway, roadside)	Various SHOPP projects that address bridge preservation, roadway & roadside preservation and limited mobility improvements. (Constrained=30% of cost to maintain).	\$489,390
SC-CT-P46-CT	Collision Reduction & Emergency Projects	Various SHOPP projects that address collision reduction, mandates (including stormwater mandates) and emergency projects. (Constrained=30% of total cost).	\$676,931
SC-CT-P47-CT	Minors	Various small SHOPP projects (less than \$1 million) that reduce/enhance maintenance efforts by providing minor operational, pavement rehab, drainage, intersection, electrical upgrades, landscape and barrier improvements. (Constrained=30% of total cost).	\$9,250
SC-CT-P49-CT	Hwy 17 Access Management - Operational Improvements	Operational improvements to existing facilities including ramp modifications, accel/decel lanes, turning lanes, driveway consolidation, driveway channelization, etc.	\$40,000
SC-CT-P51-CT	Hwy 17 Access Management - Vine Hill Area Grade Separation Concept	New structure providing grade-separation to facilitate crossing and turnaround.	\$40,000
SC-CT-P52-CT	Hwy 17 Access Management - Laurel Road/Sugarloaf Road/Glenwood Cutoff Area Grade Separation Concept	New structure providing grade-separation to facilitate crossing and turnaround.	\$40,000

Table C-6c: Santa Cruz County Highway Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-RTC-24a-RTC	1 - Hwy 1 Corridor Investment Program	Tier 1 : program level design/environmental analysis to establish a Corridor Investment Program (CIP) to reduce congestion along the 9 mile section of Highway 1 between San Andreas Rd/Larkin Valley Rd (Aptos) and Morrissey Boulevard (Santa Cruz). [Other RTC24_ projects are increments of the Highway 1 CIP.] Caltrans Project ID 05-0C730	\$1
SC-RTC-24h-RTC	5 - Hwy 1: Reconstruct Morrissey Blvd Interchange	Reconstruct Morrissey Blvd overcrossing with enhanced pedestrian and bicycle treatments (such as buffered or painted facilities) on both sides of the overcrossing, and/or a bicycle/pedestrian overcrossing at Trevethan Ave, reconfigure ramps and local streets to accommodate the new interchange, and ramp metering. [Part of Highway 1 CIP project (RTC 24a), but listed here as standalone project.]	\$45,800
SC-RTC-24i-RTC	6 - Hwy 1: Reconstruct Soquel Avenue Interchange	Reconstruct the overcrossing with enhanced pedestrian and bicycle facilities on both sides, reconfigure ramps and local streets to accommodate the new interchange, and ramp metering. [Part of Highway 1 CIP project (RTC 24a), but listed here as standalone project.]	\$67,330
SC-RTC-24j-RTC	7 - Hwy 1: Reconstruct Bay Ave/Porter St and 41st Avenue Interchange	Reconstruct highway to operate as a single interchange. Includes construction of a frontage road that includes bike lanes and sidewalks connecting the Bay/Porter and 41st Ave intersections ; reconstruction of the Bay/Porter undercrossing and the 41st Avenue overcrossing with enhanced pedestrian and bicycle treatments on both sides, and reconfiguration of ramps and local streets to accommodate local traffic and ramp metering. [Part of the Highway 1 CIP project (RTC 24a), but is listed here as a standalone project.]	\$100,000
SC-SC-P112-SCR	Mission Street (Hwy 1)/Laurel Intersection Modification	Modify traffic signal to add right-turn from Mission to Laurel and signal overlap phase.	\$1,030
SC-SC-P113-SCR	Mission Street (Hwy 1)/Swift Street Intersection Modification	Modify traffic signal to add Swift Street right-turn lane and signal overlap phase.	\$500

Table C-6c: Santa Cruz County Highway Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-SC-P92-SCR	Hwy 1/Shaffer Road Signalization	Signalization of intersection of Hwy 1 and Shaffer Rd. Project may includes some widening of Hwy 1 to accommodate a left turn lane.	\$520
SC-SV-P44-SCV	Hwy 17/Mt. Hermon Rd Interchange Operations Improvement	Add lane to SB off-ramp at Mt. Hermon/SR 17 interchange.	\$1,030

Table C-6d: Santa Cruz County Local Streets and Road Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-UC-P07-UC	Northern Loop Roadway	Construct new roadway, including bicycle lanes, on upper campus. Will be phased. Phase I: Chiquapin Extension to support Social Science 3.	\$18,590
SC-WAT-P29-WAT	Crestview/Wagner Extension	Construction of roadway connection from Atkinson Lane area to SR 152. Reconstruct/widen Wagner St.	\$4,750
SC-WAT-P30-WAT	Buena Vista/Calabasas/Freedom Connection	Construction of roadway connection from Buena Vista area to Freedom Blvd. Reconstruct Via Nicola.	\$5,950

Table C-6e: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
CAP 11SC	Clares Street Traffic Calming: Phase I and II	Implementation of traffic calming measures: chicanes, center island median, new bus stop, and road edge landscape treatments to slow traffic. Construct new safe, accessible ped crossing at 42nd and 46th Avenue.	\$250
CAP 16SC	Bay Avenue/Capitola Avenue Intersection Modifications/ Roundabout	Multimodal improvements to intersection. Roundabout.	\$1,000
CO-P28i	Varni Road Improvements (Corralitos Road to Amesti Road)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$900
SC-CAP-P05-CAP	Cliff Drive Improvements	Installation of sidewalks, pedestrian crossing and slope stabilization of embankment including seawall. Combine with CAP 31 and 33.	\$1,550
SC-CAP-P06-CAP	Citywide General Maintenance and Operations	Ongoing maintenance, repair and operation of road/street system within the City limits.	\$3,750
SC-CAP-P07p-CAP	Stockton Avenue Bridge Rehab	Replace bridge with wider facility that includes standard bike lanes and sidewalks.	\$1,500
SC-CAP-P17-CAP	Citywide Traffic Calming	Install traffic calming/neighborhood livability improvements.	\$1,136
SC-CAP-P29-CAP	Bay Avenue Traffic Calming and Bike/Ped Enhancements	Traffic calming features along Bay Avenue from Highway 1 to Monterey Avenue, including left turn pocket, buffered pedestrian facilities and bicycle treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) to address speed inconsistency between bicyclists and vehicles.	\$410
SC-CAP-P34-CAP	Capitola Village Enhancements: Capitola Ave	Multimodal enhancements along Capitola Avenue.	\$400
SC-CAP-P37-CAP	41st Avenue/Capitola Road Intersection Improvements	Widen intersection and reconfigure signal phasing.	\$200

Table C-6e: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CAP-P38-CAP	40th Avenue/Clares Street Intersection Improvements	Widen intersection and signalize.	\$1,050
SC-CO-P03-USC	Amesti Road Multimodal Improvements (Green Valley to Brown Valley Road)	Roadway rehab and reconstruction, left turn pockets at Green Valley Road, Pioneer Road/Varni Road. Add bike lanes, transit turnouts, sidewalks, merge lanes, landscaping and intersection improvements.	\$5,600
SC-CO-P04-USC	Bear Creek Road Improvements (Hwy 9 to Hwy 35)	Major rehab, add bike lanes, turnouts, merge lanes and intersection improvements. Some landscaping and drainage improvements also.	\$4,500
SC-CO-P09-USC	East Cliff Drive Improvements (32nd Avenue to Harbor)	Roadway rehab, add left turn pockets at 26th and 30th Avenue, fill gaps in bikeways and sidewalks, add transit turnouts, intersection improvements. Some landscaping and drainage improvements.	\$3,250
SC-CO-P100-USC	Brimblecom Road Bridge Replacement	The project will consist of completely replacing the existing narrow one lane structure and roadway approaches with a two lane clear span concrete bridge and standard bridge approaches.	\$2,746
SC-CO-P101-USC	Two Bar Road Bridge Rehabilitation	The project will consist of rehabilitating the existing narrow one lane structure and roadway approaches by widening to two lanes with shoulders and standard bridge approaches.	\$1,696
SC-CO-P102-USC	Glen Arbor Road Bridge Replacement	The project will consist of replacing the existing narrow two lane structure and roadway approaches by widening to 12 foot lanes with 8 foot shoulders and standard bridge approaches.	\$3,959
SC-CO-P104-USC	Soquel Dr to 41st Ave Dedicated Right Turn Lane	Project will add a dedicated right turn lane in the eastbound direction of Soquel Dr to 41st Ave	\$550
SC-CO-P105-USC	Soquel Dr to Soquel Ave Dedicated Right Turn Lane	Project will add a dedicated right turn lane in the eastbound direction of Soquel Dr to Soquel Ave	\$550

Table C-6e: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-P10-USC	Empire Grade Improvements	Road rehab and maintenance, left turn pocket at Felton Empire Road, add bike lanes, transit facilities, some sidewalks, landscaping. Drainage improvements, merge lanes and intersection improvements may also be needed.	\$3,560
SC-CO-P11-USC	Freedom Blvd Multimodal Improvements (Bonita Dr to City of Watsonville)	Add bike lanes, sidewalks on some segments, transit turnouts, signalization. Left turn pockets at Bowker, Day Valley, White Rd, and Corralitos Rd. Also includes merge lanes, intersection improvements, landscaping, major rehabilitation and maintenance, drainage improvements.	\$2,325
SC-CO-P12-USC	Graham Hill Road Multimodal Improvements (City of SC to Hwy 9)	Bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes, traffic signals. Major rehabilitation and maintenance. Drainage improvements. Signal upgrade at SR 9.	\$5,265
SC-CO-P13-USC	Green Valley Road Improvements	Add two-way left turn lanes from Mesa Verde to Pinto Lake on Green Valley Road. Also includes some road rehab and maintenance, bike lanes, sidewalks, transit facilities, landscaping and merge lanes.	\$3,100
SC-CO-P14-USC	La Madrona Drive Improvements (El Rancho Drive to City of Scotts Valley)	Bike lanes, sidewalks, transit turnouts, left turn pockets at Sims Road, Highway 17 and El Rancho Road, merge lanes, and intersection improvements. Also includes major rehabilitation, drainage and maintenance.	\$2,715
SC-CO-P15-USC	Lakeview Road Improvements	Major road rehab, add left turn pocket at College Road, intersection improvements at Carlton Road. Also add bike lanes, new transit facilities, landscaping. Drainage improvements, merge lanes and intersection improvements may also be needed.	\$1,240
SC-CO-P17-USC	Sims Road Improvements (Graham Hill Road to La Madrona Drive)	Road rehab and maintenance, drainage, intersection improvements, landscaping. Add bike, ped and transit facilities.	\$1,320
SC-CO-P19-USC	Soquel Drive Improvements (Soquel Avenue to Freedom Boulevard)	Major rehab, merge lanes, intersections improvements, signal coordination, transit turnouts, fill sidewalk and bike facility gaps, some landscaping.	\$15,000

Table C-6e: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-P20-USC	State Park Drive Improvements Phase 2	Transit turnouts, two way left turn, merge lanes, intersection improvements, and fill gaps in bike and ped facilities including pedestrian crossing improvements, bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals). Plus, major rehabilitation and maintenance, drainage improvements, landscaping.	\$1,005
SC-CO-P22-USC	Paul Sweet Road Improvements (Soquel Dr to end)	Major road rehab and maintenance. Also adds bike lanes, sidewalks, landscaping. Drainage improvements, merge lanes and intersection improvements, and new transit facilities may also be needed.	\$930
SC-CO-P23-USC	College Road Improvements (Hwy 152 to Lakeview Road)	Major road rehab, add left turn pocket at Cutter Drive. Also add bike lanes, transit turnouts, sidewalks, landscaping. Drainage improvements, merge lanes and intersection improvements may also be needed.	\$1,760
SC-CO-P24-USC	Lockwood Lane Improvements (Graham Hill Road to SV limits)	Major road rehab, add bicycle lanes, sidewalks, some transit facilities, landscaping and intersection improvements.	\$638
SC-CO-P26a-USC	41st Avenue Improvements Phase 2 (Hwy 1 Interchange to Soquel Drive)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$900
SC-CO-P26b-USC	Beach Road Improvements (City limits to Pajaro Dunes)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$900
SC-CO-P26d-USC	Brown Valley Road Improvements (Corralitos Road to Redwood Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$900
SC-CO-P26e-USC	Buena Vista Road Improvements (San Andreas to Freedom Boulevard)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$2,175

Table C-6e: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-P26g-USC	Cassery Road Improvements (Hwy 152 to Green Valley Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$562
SC-CO-P26h-USC	Center Avenue/Seacliff Drive Improvements (Broadway to Aptos Beach Drive)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$900
SC-CO-P26i-USC	Chanticleer Avenue Improvements (Hwy 1 to Soquel Drive)	Roadway and roadside improvements including bike lanes, sidewalks, drainage and intersection improvements.	\$900
SC-CO-P26j-USC	East Zayante Road Improvements (Lompico Road to just before Summit Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$1,275
SC-CO-P26k-USC	El Rancho Drive Improvements (Mt. Hermon/Hwy 17 to SC city limits)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$1,725
SC-CO-P26l-USC	Eureka Canyon Road Improvements (Hames Road to Buzzard Lagoon Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$1,725
SC-CO-P26m-USC	Glen Canyon Road Improvements (Branciforte Drive to City of Scotts Valley)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$4,350
SC-CO-P26n-USC	Glenwood Drive Improvements (Scotts Valley city limits to State Hwy 17)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$2,175
SC-CO-P26p-USC	Mattison Lane Improvements (Chanticleer Avenue to Soquel Avenue)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$1,050
SC-CO-P26q-USC	Mt. Hermon Road Improvements (Lockhart Gulch to Graham Hill Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$2,175

Table C-6e: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-P26r-USC	Porter Street Improvements (Soquel Drive to Paper Mill Road)	Roadway and roadside improvements including buffered sidewalks and bicycle treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) to address speed inconsistency between bicyclists and vehicles, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$900
SC-CO-P26s-USC	Seascape Boulevard Improvements (Sumner Avenue to San Andreas Road)	Roadway improvements and pavement rehabilitation.	\$450
SC-CO-P26u-USC	Summit Road Improvements	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$4,050
SC-CO-P27a-USC	37th/38th Avenue (Brommer to East Cliff) Multimodal Circulation Improvements and Greenway	Evaluate and if feasible improve vehicle and transit access on 38th Avenue from East Cliff to Brommer and develop greenway on 37th Avenue from East Cliff to Portola. Roadway improvements may include roadway and roadside improvements including sidewalks, bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals), transit turnouts, left turn pockets and intersection improvement.	\$1,500
SC-CO-P27b-USC	Aptos Beach Dr Improvements (Esplanade to Rio Del Mar Blvd)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	\$1,240
SC-CO-P27c-USC	Corcoran Avenue Improvements (Alice Street to Felt Street)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	\$470
SC-CO-P27g-USC	Mountain View Road Improvements (Branciforte Drive to Rodeo Gulch Road)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	\$1,240

Table C-6e: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-P27h-USC	Paulsen Road Improvements (Green Valley Road to Whiting Road)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	\$1,000
SC-CO-P27i-USC	Pinehurst Dr Improvements (entire length)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	\$700
SC-CO-P27j-USC	Seacliff Drive Improvements (entire length)	Roadway and roadside improvements on various Major Collectors including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvement.	\$1,760
SC-CO-P27k-USC	Spreckels Drive Improvements (Soquel Drive to Aptos Beach Drive)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	\$900
SC-CO-P27l-USC	Winkle Avenue Improvements (entire length from Soquel Drive)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvement.	\$1,725
SC-CO-P28a-USC	Bean Creek Road Improvements (Scotts Valley City Limits to Glenwood Drive)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$1,275
SC-CO-P28c-USC	Commercial Way Improvements (Mission Drive to Soquel Drive)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$450
SC-CO-P28d-USC	Felton Empire Road Improvements (entire length to State Hwy 9)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$1,725

Table C-6e: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-P28f-USC	Pine Flat Road Improvements (Bonny Doon Road to Empire Grade Road)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$1,725
SC-CO-P28g-USC	Soquel-Wharf Road Improvements (Robertson Street to Porter Street)	Roadway and roadside improvements on various Minor Arterials including addition of bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals), transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$515
SC-CO-P28h-USC	Thurber Lane Improvements (entire length)	Roadway and roadside improvements on various Minor Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$1,275
SC-CO-P29b-USC	Bonita Drive Improvements (entire length)	Improvements of roadways and roadsides on various Minor Collectors including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$1,240
SC-CO-P29c-USC	Cliff Drive Improvements (Rio Del Mar to Railroad Crossing)	Improvements of roadways and roadsides on various Minor Collectors including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$620
SC-CO-P29e-USC	Maciel Avenue Improvements (Capitola Road to Mattison Lane)	Improvements of roadways and roadsides on various Minor Collectors including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$1,050

Table C-6e: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-P29f-USC	Paul Minnie Avenue Improvements (Rodriguez Street to Soquel Avenue)	Improvements of roadways and roadsides on various Minor Collectors including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$900
SC-CO-P29g-USC	Polo Drive Improvements (Soquel Drive to end)	Improvements of roadways and roadsides on various Minor Collectors including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$1,450
SC-CO-P29h-USC	Webster Street Improvements (Jose Avenue to 16th Street)	Improvements of roadways and roadsides on various Minor Collectors including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$1,240
SC-CO-P30b-USC	Alba Road Improvements (Empire Grade to State Hwy 9)	Roadwork includes major rehabilitation and maintenance of the road and roadsides.	\$1,760
SC-CO-P30c-USC	Branciforte Drive Improvements (City of Santa Cruz to Vine Hill Road)	Improvements of roadways and roadsides on various Major Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road and roadsides.	\$1,760
SC-CO-P30d-USC	Cabrillo College Drive Improvements (Park Avenue to Twin Lakes Church)	Improvements of roadways and roadsides on various Major Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road and roadsides.	\$1,000
SC-CO-P30f-USC	Glen Arbor Road Improvements (State Hwy 9 to State Hwy 9)	Improvements of roadways and roadsides on various Major Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road and roadsides.	\$1,240

Table C-6e: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-P30h-USC	Granite Creek Road Improvements (Branciforte Drive to City of Scotts Valley)	Improvements of roadways and roadsides on various Major Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road and roadsides.	\$1,760
SC-CO-P30i-USC	Larkin Valley Road Improvements (San Andreas Road to Buena Vista Drive)	Improvements of roadways and roadsides on various Major Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road and roadsides.	\$620
SC-CO-P30j-USC	Laurel Glen Road Improvements (Soquel-San Jose Road to Mt. View/Rodeo Gulch Road)	Improvements of roadways and roadsides on various Major Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road and roadsides.	\$1,240
SC-CO-P30k-USC	Lompico Road Improvements (E Zayante Road to end)	Improvements of roadways and roadsides on various Major Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road and roadsides.	\$620
SC-CO-P30l-USC	Mar Monte Avenue Improvements (San Andreas Road to State Hwy 1)	Improvements of roadways and roadsides on various Major Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road and roadsides.	\$620
SC-CO-P30n-USC	Rio Del Mar Boulevard Improvements (Esplanade to Soquel Drive)	Improvements of roadways and roadsides on various Major Arterials including addition of bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road and roadsides.	\$2,275

Table C-6e: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-P30p-USC	Trout Gulch Road Improvements (Soquel Drive to end)	Improvements of roadways and roadsides on various Major Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road and roadsides.	\$3,000
SC-CO-P30q-USC	Vine Hill Road Improvements (Branciforte/Mt. View Road to State Hwy 17)	Improvements of roadways and roadsides on various Major Arterials including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road and roadsides.	\$1,450
SC-CO-P31a-USC	26th Ave Improvements (entire length-Portola Dr to end)	Roadway and roadside improvements on various Major Collectors including sidewalks, bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$2,580
SC-CO-P31b-USC	Capitola Road Ext Improvements (Capitola Road to Soquel Avenue)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$1,240
SC-CO-P31c-USC	Day Valley Rd Improvements (entire length-Freedom Blvd to Valencia Rd)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$1,240
SC-CO-P31d-USC	Ledyard Way Improvements (entire length-Soquel Dr to Soquel Dr)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$620
SC-CO-P31e-USC	Lockhart Gulch Improvements (Scotts Valley City limits to end)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$1,240
SC-CO-P31f-USC	Mesa Drive Improvements (Vienna Drive to Ledyard Way)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$1,240

Table C-6e: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-P31g-USC	Opal Cliff Drive Improvements (41st Avenue to Captiola City Limits)	Roadway, roadside and intersection improvements including sidewalks, bike treatments (such as buffered and/or painted bike lanes), designed to accommodate the number of users and link to East Cliff Drive.	\$950
SC-CO-P31h-USC	Pioneer Road Improvements (Amesti Road to Green Valley Road)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$880
SC-CO-P31i-USC	Rodeo Gulch Rd Improvements (So & North: Mt. View/Laurel Glen Rd to Hwy 1)	Roadway and roadside improvements on various Major Collectors including bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$1,760
SC-CO-P31j-USC	Roland Drive Improvements (30th to 35th)	Roadway and roadside improvements and implementation of greenway, which gives priority to bicycles and pedestrians on low volume, low speed streets including, pedestrian facilities, way finding and pavement markings, bicycle treatments to connect to new bike/ped connection to 41st.	\$880
SC-CO-P32a-USC	Clubhouse Drive Improvements (Sumner Avenue to Rio Del Mar Boulevard)	Road rehabilitation and maintenance. Roadside improvements: left lane pockets, sidewalks, bike lanes and transit turnouts.	\$1,450
SC-CO-P32b-USC	Hames Rd Improvements (entire length-Freedom Blvd to Eureka Canyon Rd)	Road rehab and maint. Roadside improvements--left lane pockets, sidewalks, bike lanes and transit turnouts.	\$3,620
SC-CO-P32c-USC	Harkins Slough Rd. Improvements (entire length-Buena Vista Dr to State Hwy 1)	Road rehab and maint. Roadside improvements--left lane pockets, sidewalks, bike lanes and transit turnouts.	\$1,760
SC-CO-P32d-USC	Huntington Drive Improvements (Monroe Avenue to Valencia Road)	Road rehab and maint. Roadside improvements--left lane pockets, sidewalks, bike lanes and transit turnouts.	\$2,380

Table C-6e: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-P32e-USC	Jamison Cr Rd Improvements (entire length-Empire Grade to Hwy 236)	Road rehab and maint. Roadside improvements--left lane pockets, sidewalks, bike lanes and transit turnouts.	\$620
SC-CO-P32f-USC	Quail Hollow Rd Improvements (entire length- East Zayante to Glen Arbor Rd)	Road rehab and maint. Roadside improvements--left lane pockets, sidewalks, bike lanes and transit turnouts.	\$830
SC-CO-P32g-USC	Smith Grade Improvements (entire length-Empire Grade to Bonny Doon Rd)	Road rehab and maint. Roadside improvements--left lane pockets, sidewalks, bike lanes and transit turnouts.	\$2,380
SC-CO-P32h-USC	Sumner Ave Improvements (entire length-Rio Del Mar Blvd to end [just past via Novella])	Road rehab and maint. Roadside improvements--left lane pockets, sidewalks, bike lanes and transit turnouts.	\$1,450
SC-CO-P32j-USC	Valencia Rd Improvements (Trout Gulch Rd to Valencia School Rd)	Road rehab and maint. Roadside improvements--left lane pockets, sidewalks, bike lanes and transit turnouts.	\$1,760
SC-CO-P33a-USC	Bowker Rd Improvements (entire length-Buena Vista Dr to Freedom Blvd)	Roadway and roadside improvements on various Minor Collectors including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$620
SC-CO-P33b-USC	Cathedral Dr Improvements (entire length)	Roadway and roadside improvements on Minor Collector. Roadwork includes major rehabilitation and maintenance of the road.	\$620
SC-CO-P33d-USC	Harper St Improvements (entire length-El Dorado Ave to ECM)	Roadway and roadside improvements on various Minor Collectors including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$930

Table C-6e: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-P33e-USC	Manfre Rd Improvements (entire length-Larkin Valley Rd to Buena Vista Dr)	Roadway and roadside improvements on various Minor Collectors including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$620
SC-CO-P33f-USC	Mar Vista Dr Improvements (entire length-just before Seacliff Dr to Soquel Dr)	Roadway and roadside improvements on various Minor Collectors including addition of bike lanes, buffered sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$300
SC-CO-P33g-USC	McGregor Drive Improvements (Capitola city limits to Searidge Road)	Roadway and roadside improvements on various Minor Collectors including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$1,240
SC-CO-P33h-USC	Thompson Ave Improvements (entire length-Capitola Rd to end)	Roadway and roadside improvements including major rehabilitation and maintenance of road and includes implementation of greenway, which gives priority to bicycles and pedestrians on low volume, low speed streets including, pedestrian facilities, way finding and pavement markings, bicycle treatments to connect to MBSST.	\$1,240
SC-CO-P33i-USC	Wallace Ave Improvements (entire length-Huntington Dr to end)	Roadway and roadside improvements on various Minor Collectors including addition of bike lanes, transit turnouts, left turn pockets, merge lanes and intersection improvements. Roadwork includes major rehabilitation and maintenance of the road.	\$880
SC-CO-P35-USC	Countywide General Road Maintenance and Operations	Ongoing maintenance, repair, and operation of road/street system within the unincorporated areas of the county.	\$100,000
SC-CO-P36-USC	Soquel-San Jose Road Improvements (Paper Mill Road to Summit Road)	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$2,000

Table C-6e: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-P39-USC	Murphy Crossing Improvements	Bikeway on Murphy Crossing (Hwy 129 to Monterey Couty line), major rehabilitation and maintenance of road, drainage improvements may also be needed.	\$1,240
SC-CO-P42-USC	Spreckels Dr/Treasure Island Dr Improvements	Addition of bike lanes, intersection improvements, major road rehabilitation, road maintenance, and possible drainage improvements.	\$620
SC-CO-P43-USC	Bonny Doon Road Improvements (Hwy 1 to Pine Flats Road)	Construction of a Class 1 bike lane facility, addition of transit stops, intersection improvements, major road rehabilitation, road maintenance and drainage improvements.	\$8,260
SC-CO-P49-USC	Carol Way/Lompico Creek Bridge Replacement	Replace existing single span-two lane bridge construction of steel girders and long deck with new 30 ft wide single span flat sale concrete bridge. Include (2) 11 ft lanes and (2) 4 ft shoulders.	\$1,240
SC-CO-P51-USC	Redwood Lodge Road (Entire Length)	Roadway and roadside improvements including curb, gutter, sidewalk, bike lanes, left turn lanes, intersection improvements and roadway rehabilitation.	\$3,100
SC-CO-P58-USC	Soquel Dr Traffic Signal and Left Turn Lane (Robertson St)	Install left turn lane at signalized intersection from Soquel Drive to Robertson Street and associated roadside improvements.	\$1,000
SC-CO-P61-USC	Glenwood Cutoff General Improvements (Glenwood Drive to Hwy 17)	Roadway and roadside improvements including bike lanes, left turn lanes, intersection improvements and roadway rehabilitation.	\$3,100
SC-CO-P65-USC	Bulb Ave Road Improvements (Garden St to Capitola City Limits)	Roadway and roadside improvements including curb, gutter, sidewalk, bike lanes, left turn lanes, intersection improvements and roadway rehabilitation.	\$770
SC-CO-P67-USC	El Dorado Ave Road Improvements (Capitola Rd to RR)	Roadway and roadside improvements including curb, gutter, buffered sidewalk, bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals), left turn lanes, intersection improvements and roadway rehabilitation.	\$1,810

Table C-6e: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CO-P71-USC	Countywide Bike Projects	Bike projects based on needs identified through the Santa Cruz County Bicycle Plan and plan updates. These are in addition to projects listed individually in the RTP.	\$4,130
SC-CO-P82-USC	Quail Hollow Rd Bridge Replacement Project	The project will consist of completely replacing the existing two lane structure and roadway approaches with a two lane clear span concrete bridge and standard bridge approaches.	\$2,430
SC-CO-P86-USC	Forest Hill Dr @ Bear Creek Bridge Replacement Project	The Project will consist of completely replacing existing steel girder bridge crossing Bear Creek with a new precast concrete voided slab bridge.	\$2,050
SC-CO-P87-USC	Rancho Rio Ave @ Newell Creek Bridge Replacement Project	The project will consist of completely replacing the existing one lane structure and roadway approaches with a two lane clear span concrete slab bridge and standard bridge approaches.	\$1,730
SC-CO-P92-USC	Hwy 152/Holohan Road Safety Improvement Project	Pedestrian and bicycle safety improvements. Intersection capacity enhancements and signal modifications.	\$2,200
SC-CO-P99-USC	Pleasant Way Bridge Replacement	The project will consist of completely replacing the existing narrow one lane structure and roadway approaches with a two lane clear span concrete bridge and standard bridge approaches.	\$3,740
SC-CT-P33-WAT	East Lake Ave-(Hwy 152) Widening (Martinelli St-Holohan Rd)	Widen East Lake Ave. (SR 152) from 2 to 4 lanes (Martinelli St-Holohan Rd).	\$1,030
SC-SC-P07-SCR	Citywide Operations and Maintenance	Ongoing maintenance, repair, and operation of street system within the City limits. (Const=\$3.0M/yr; Unconst=\$4.2M/yr)	\$105,000
SC-SC-P110-SCR	River (Rte 9)/Fern Intersection Modification	Install traffic signal, sidewalk and new access ramps. Provide bikelanes on Fern.	\$520
SC-SC-P115-SCR	North Branciforte/Water Intersection Modification	Modify traffic signal and add additional lanes per traffic study. Include signal interconnect if applicable.	\$2,070

Table C-6e: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-SC-P116-SCR	River Sreet/River Street South Intersection Modification	Install a roundabout or traffic signal to improve access and safety to the Downtown core, integrating bike and pedestrian facilities.	\$520
SC-SC-P12-SCR	Morrissey/Poplar/Soquel Intersection Modification	Modify the roadway configuration in the Morrissey/Poplar/Soquel triangle area to improve traffic circulation and safety for all modes.	\$2,070
SC-SC-P130-SCR	Mission Street Improvement Plan	Evaluate and design Mission intersection improvements at Chestnut-King, Laurel, Bay and Swift based on the General Plan.	\$1,500
SC-SC-P66-SCR	Ocean Street Widening from Soquel to East Cliff	Implement this phase of the Ocean Street plan that includes utility undergrounding, bike lanes, wider sidewalks, pedestrian crossing islands/bulb outs, transit improvements, pedestrian scale street lights, street trees and left turn lanes at Broadway and a right-turn lane at San Lorenzo Blvd. This includes pedestrian and bicycle crossing improvements and detection and connectivity to the pedestrian and bicycle path on the San Lorenzo River and adjacent neighborhoods.	\$5,170
SC-SC-P73-SCR	Neighborhood Traffic Management Improvements	Install traffic control devices and roadway design features to manage neighborhood traffic.	\$2,580
SC-SC-P76-SCR	Storey/King Street Intersection Left-Turn Lane	Remove parking and modify striping for second southbound left turn lane.	\$100
SC-SC-P77-SCR	Bay Street Corridor Modifications	Intersection modifications on Bay Street Corridor from Mission Street to Escalona Drive, including widening at the Mission Street northeast corner and widening on Bay. Improve bike lanes and add sidewalks to west side of Bay.	\$4,130

Table C-6e: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-SC-P84-SCR	Ocean Street Streetscape and Intersection, Water to Soquel	Implement this phase of the adopted Ocean Street plan including adding turn lanes on Ocean Street at the Water Street intersections, wider sidewalks, pedestrian crossing islands/bulb outs, transit improvements, street trees, pedestrian scale street lights, and medians improvements, way finding, and pedestrian and bicycle connectivity to San Lorenzo Park and neighborhoods.	\$6,200
SC-SC-P86-SCR	Ocean Street Streetscape and Intersection, Plymouth to Water	Implement this phase of the Ocean Street plan and modify Plymouth Street to provide separate turn lanes and through lanes, widen sidewalks, pedestrian islands/bulbouts, transit improvements, street trees, street lighting and medians landscaping improvements. This includes pedestrian and bicycle crossing improvements and detection and connectivity to the pedestrian and bicycle path on the San Lorenzo River and adjacent neighborhoods. Include Gateway treatment.	\$2,130
SC-SC-P87-SCR	Soquel Avenue Corridor Widening (Branciforte-Morrissey)	Minor widening and signal modifications along Soquel Avenue corridor from Branciforte to Morrissey Boulevard to widen sidewalks, transit improvements, improve pedestrian and bicycle detection and crossings, add a travel lane, maintain some commercial parking and improve existing bike lanes. Replacing the split phasing with protected left-turns at Branciforte to reduce delays for all modes of travel and GHG.	\$2,320
SC-SC-P96-SCR	Bay/California Traffic Signals	Install traffic signals and roundabouts for safety and capacity improvements.	\$1,000
SC-SC-P97-SCR	Laurent/High Intersection Improvements	Install traffic signal.	\$410
SC-SC-P99-SCR	Seabright/Water Intersection Improvements	Modify unsignalized intersection to add northbound right and extend left-turn pocket.	\$100

Table C-6e: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-SV-P09-SCV	Mt. Hermon Road Circulation Master Plan	Provides various circulation and access improvements to the Mount Hermon corridor.	\$3,620
SC-SV-P10-SCV	Erba Lane/Terrace View/SV Drive Realignment	Realign Terrace View to access Scotts Valley Drive via Erba Lane.	\$520
SC-SV-P11-SCV	Sky Park Commercial Area Circulation	Construct infrastructure improvement for Sky Park commercial area.	\$2,070
SC-SV-P13-SCV	Mt Hermon, Lockwood, Springs Lake Widening	Widen, reconstruct and improve portions of roadway and intersection.	\$4,130
SC-SV-P14-SCV	El Pueblo Road Ext North	Connect El Pueblo Road via Janis Way to Victor Square, crossing Carbonero Creek.	\$1,240
SC-SV-P15-SCV	El Pueblo Road Extensions	Connect El Pueblo Road to Disc Drive.	\$410
SC-SV-P16-SCV	Bean Creek Road Realignment	Realign Bean Creek Road to intersect Scotts Valley Drive farther North to create a four way intersection.	\$2,840
SC-SV-P22-SCV	Emergency Access- Sunridge/Pueblo	Connect Sunridge Drive to Disc Drive for emergency access.	\$410
SC-SV-P23-SCV	Emergency Access- Bethany/Glenwood	Connect Bethany Drive to Glenwood Drive.	\$210
SC-SV-P24-SCV	Emergency Access Granite Creek/Hwy 17	Connect Granite Creek Road to SR 17 via Navarra Drive to Sucinto Drive for emergency access.	\$570
SC-SV-P25-SCV	Emergency Access SV Drive/Upper Willis Drive	Connect Scotts Valley Drive to Upper Willis Road for emergency access.	\$1,030
SC-SV-P26-SCV	Emergency Access Whispering Pines	Connect Whispering Pines Drive to Manana Woods for emergency access.	\$50
SC-SV-P27-SCV	Citywide General Maintenance and Operations	Ongoing maintenance, repairs and operation of road/street system within the City limits. (\$400K/yr const; \$250/yr unconst).	\$1,750

Table C-6e: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-SV-P51-SCV	Mt. Hermon Road/Town Center Entrance Traffic Signal	Install new traffic signal at the intersection of the future Town Center road that will accommodate increased pedestrian travel. Add a right-turn lane on the westbound approach. New signalization of the intersection at the future Town Center's primary access point on Mt. Hermon Road would provide protected pedestrian crossing, ADA accessible curb ramps and detectable surfaces on all intersection corners. Permitted left-turn phasing shall be used for the northbound and southbound approaches, while protected left-turn phasing shall be provided on the eastbound and westbound Mt. Hermon Road approaches.	\$130
SC-SV-P52-SCV	Kings Village Road/Town Center Entrance Traffic Signal	Install new traffic signal at the intersection of Kings Village Road and new Town Center entrance (near transit center) with protected pedestrian crossings and transit signal priority. New Signalization of the intersection on Kings Village Road at the transit center exit and future Plan street connection would provide a location for protected pedestrian crossings, and would allow transit operators to easily exit the transit center and maintain operating schedules.	\$105
SC-UC-P03-UC	Steinhart Way Multimodal Improvements	Roadway improvements for shuttles, bikes and pedestrians.	\$2,500
SC-UC-P04-UC	Meyer Drive Extension/Jordan Gulch Bridges	Extension of Meyer Drive from existing Meyer Drive to Hagar Drive. Includes potential construction of two bridges, pedestrian, and bicycle facilities.	\$20,660
SC-UC-P08-UC	Northern Entrance	Construct new access road including Cave Gulch Bridge to Empire Grade and road and bicycle lanes to Northern Heller Drive for access and fire safety.	\$10,330
SC-UC-P14-UC	Hagar/Steinhart Intersection Improvements	Signal, pedestrian safety improvements, roadway improvements.	\$1,030

Table C-6e: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-UC-P19-UC	Transit Pullouts and Shelters Enhancements	Construction and installation of transit pullouts and reconstruction of shelters throughout campus.	\$1,550
SC-UC-P47-UC	Hagar-Coolidge Connector Road/Hagar/East Remote Intersection Improvements	New roadway connector, including bicycle lanes, between Hagar Drive and Coolidge, plus Hagar/East Remote Intersection Improvements: signal, pedestrian safety improvements and roadway improvements.	\$3,100
SC-UC-P59-UC	UCSC Lump Sum Roadway Maintenance	Repaving and rehabilitation of roadways on UCSC campus to maintain existing network.	\$7,725
SC-VAR-P23-VAR	Coolidge Drive Reconstruction	Reconstruction of roadway and bike lane.	\$3,100
SC-WAT 27a-WAT	Main Street (Hwy 152)/Freedom Boulevard Roundabout	Installation of a roundabout to replace the currently signalized intersection with safety considerations for bike/ped. Caltrans Project ID - 05-OT150.	\$1,500
SC-WAT-P06-WAT	Citywide General Maintenance and Operations	Ongoing maintenance, repair, and operation of road/street system, including bicycle and pedestrian facilities.(Total Need = \$2,600/year, constr=\$1500/yr)	\$20,000
SC-WAT-P24-WAT	Citywide Transportation Projects	Lump sum of transportation projects to be identified in the future. Including major rehabilitation and operational improvements (\$1.2M/yr).	\$16,200
SC-WAT-P31-WAT	Ohlone Parkway Improvements - Phase 2 (UPRR to West Beach)	Roadway, pedestrian, and bicycle facilities.	\$600
SC-WAT-P34-WAT	Airport Blvd Modifications (Hanger Way to Ross Ave)	Reconstruct or repave roadway and bike lanes; repair, replace and install curb, gutter, sidewalk and curb ramps; replace and upgrade signage and striping.	\$600
SC-WAT-P39-WAT	East Fifth Street (Main Street to Lincoln Street)	Repair, replace and install curb, gutter, sidewalk and curb ramps; replace and upgrade signage and striping.	\$300

Table C-6e: Santa Cruz County Local Streets and Road Operations, Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-WAT-P40-WAT	Main St Modifications (500 Block: Fifth St to East Lake Ave)	500 block: Fifth Street to East Lake Avenue. Repair, replace and install curb, gutter and curb ramps; replace and upgrade signage and striping. Evaluate and if feasible, provide bike treatments (such as buffered and/or painted bike lanes, bike boxes, bike signals) and buffered sidewalk.	\$710
SC-WAT-P41-WAT	West Lake Avenue Modifications (Main Street to Rodriguez Street)	Repair, replace and install curb, gutter, sidewalk and curb ramps; replace and upgrade signage and striping	\$240
SC-WAT-P48-WAT	Walker Street Modifications (Beach Street to Watsonville Slough)	Repave roadway and bike lanes; repair, replace and install curb, gutter, sidewalk and curb ramps; replace and upgrade signage and striping	\$3,200
SC-WAT-P79-WAT	Harkins Slough Rd Pedestrian & Bicycle Bridge	Install pedestrian & bicycle bridge, pedestrian path, sidewalk, striping and signage	\$11,910
SC-WAT-P83-WAT	Maintain and Improve Trails	Maintain and enhance existing pedestrian and bicycle trails	\$400
SC-WAT-P85-WAT	Freedom Blvd (Airport Blvd to Buena Vista Dr)	Repair and resurface damaged roadway and bike lanes, replace damaged sidewalks, add pedestrian facilities where none exist.	\$3,000
SC-WAT-P88-WAT	Airport Blvd Pavement Reconstruction	Reconstruct roadway	\$325

Table C-6f: Santa Cruz County Other Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
RTC 04SC	Planning, Programming & Monitoring (PPM) - SB 45	Development and amendments to state and federally mandated planning and programming documents, monitoring of programmed projects. Avg annual cost: \$250k/yr.	\$1,250
SC-AIR-P01-WAT	Lump Sum Watsonville Airport Capital Projects	Projects from the Watsonville Airport Capital Improvement Program. Includes new hangers, reconstruction of aviation apron, security feature and runway extensions.	\$10,000
SC-CAP-P56-CAP	Monterey Avenue and Park Avenue I/S Improvements	Signalization or other LOS improvements.	\$500
SC-CO-P109-USC	Pajaro River Flood Risk Management Project	Rebuild Pajaro River Levees to mitigate flood danger. Includes rebuilding Highway 129 and 152 bridges at Salsipuedes Creek and Corralitos Creek and other transportation facilities within the project envelope. [Total flood control project estimated to cost \$400M and be primarily funded by State and Federal Water and U.S. Army Corps of Engineers grants, which are not part of the RTP Financial Element; \$136M estimate for bridges over Hwy 1 (\$100M), 129 (\$18M), 152 (\$18M)]	\$400,000
SC-CO-P110-USC	Soquel Dr. Reversible Lane (Flex Lane) Feasibility Study (County)	Feasibility study to install reversible/flex lanes on Soquel Dr. The project aims to reduce trip delays, congestion and air quality.	\$50
SC-CO-P94-USC	Swanton Rd Bridge Replacement	The project will consist of replacing existing 3 span steel girder bridge with a single span concrete box girder bridge.	\$2,540
SC-CO-P95-USC	Lompico Rd Bridge Replacement	The project will consist of replacing existing steel stringer bridge with a reinforced concrete slab bridge.	\$1,860
SC-CO-P96-USC	Capital improvement projects consistent with the Sustainable Santa Cruz County Plan	Construct associated multi-modal infrastructure improvements associated with the Sustainable Santa Cruz County Plan	\$15,000
SC-CO-P98-USC	Upper Zayante Rd Improvements	Roadway and roadside improvements including bike lanes, sidewalks, transit turnouts, left turn pockets, merge lanes and intersection improvements.	\$1,500

Table C-6f: Santa Cruz County Other Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CT-P09e-CT	Hwy 9 SLV Corridor Projects	May be implemented by Caltrans or County of SC, in partnership with others. Implementation of priorities identified in the Complete Streets Corridor Plan. Includes improvements to increase safety and discourage speeding, updated and expanded bicycle and pedestrian facilities including shoulder widening, auto turn lanes and other auto circulation improvements, and transit improvements in SLV. SLV Complete Streets PID development efforts underway; some may be integrated into SHOPP projects. Capital Cost Est. TBD - preliminary estimate \$100-150 million. \$10M Measure D. Some bike/ped elements also shown in CO-P46a/b.	\$100,000
SC-CT-P50-CT	Hwy 17 Access Management - Multimodal Improvements	Multimodal improvements including park and ride improvements and facilities serving separated bike/ped crossing or express transit route.	\$15,000
SC-MTD-P59-MTD	Electric bus charging and storage at Judy K. Souza Operations Facility	Charging stations, canopies, and battery storage for fleet of up to 100 buses	\$27,000
SC-RTC 24a-RTC	91 - Hwy 1: Reconstruction of Two Railroad Crossings in Aptos	Reconstruct two railroad crossings over Highway 1 in Aptos. [Part of Highway 1 CIP project (RTC 24a), but listed as a standalone project.]	\$41,000
SC-RTC-P25-VAR	Transit Oriented Development Grant Program	Smart growth grant program to fund TODs that encourage land use and transportation system coordination. May include joint child care/PNR/transit centers.	\$2,600
SC-RTC-P50-RTC	Countywide Bicycle, Pedestrian and Vehicle Occupancy Counts	Conduct counts to assess mode split over time and assess impact of new facilities.	\$200
SC-RTC-P51-RTC	Performance Monitoring	Transportation data collection and compilation to monitor performance of transportation system to advance goals/targets. Includes travel surveys of commuters, Transportation Demand Management plan, a low-stress bicycle network plan and parking standards plan.	\$1,655
SC-SC-P03-SCR	Hwy 1 Sound Wall	Install sound wall on Hwy 1: River to Chestnut.	\$520

Table C-6f: Santa Cruz County Other Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-UC-P42-UC	Coolidge Overlook	Improve overlook for parking, benches and signage for Sanctuary.	\$620
SC-UC-P65-UC	Electric Vehicle Charging Stations	Add additional electrical infrastructure and install electric vehicle charging stations around campus.	\$760
SC-UC-P76-UC	UCSC Campus Transit EV Bus Charging and Parking Yard	Development of a new Electric bus Charging and Parking Yard and development of new electrical infrastructure for EVSE for campus transit fleet.	\$10,000
SC-UC-P77-UC	Multimodal Hub Planning Study	Study to propose concept for development of various types of multi-modal hubs for main campus and satellite facilities to include transit, parking, bike, pedestrian and other mobility options to meet future needs.	\$750
SC-VAR-P21-VAR	Plug-in Electric Vehicle Access, Education & Promotion	Target motorist looking for a cleaner vehicle by providing access, education and promotion on ever evolving plug-in electric vehicles (PEV). Provide PEV car share, rental and demo drives, educational workshops, online, and hard copy information. Promote through current EA groups, partners, media and other available sources.	\$2,500
SC-VAR-P22-VAR	Monterey Bay Electric Vehicle Alliance (MBEVA)	Help facilitate this broad collaboration of PEV advocates, businesses, union labor, manufacturers and public agencies to assist the adoption of PEV's in the Monterey Bay region. MBEVA's main goals are to: Create PEV infrastructure in this region. Educate the public on the benefits of PEV's. Educate gov't agencies on ways to streamline PEV policy, permitting and implementation and help train workforce for PEV related jobs.	\$2,500
SC-VAR-P49-VAR	EV Charging Stations for Low Income Residents	EV charging station installation with a focus on equity so low income residents can access home charger especially those living in apartment/multi-dwelling units.	\$8,000
SC-WAT-P56-WAT	Watsonville-wide HOV Priority	Evaluate HOV priority at signals and HOV queue bypass.	\$60

Table C-6f: Santa Cruz County Other Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-WAT-P66-WAT	West Beach Street (Lee Road to Ohlone Parkway)	Repair, reconstruct and/or upgrade pavement, bike lanes, sidewalks, transit facilities, signage and striping	\$2,900
SC-WAT-P67-WAT	West Beach Street (Ohlone Parkway to Walker Street)	Repair, reconstruct and/or upgrade pavement, bike lanes, sidewalks, transit facilities, signage and striping	\$4,600
SC-WAT-P69-WAT	Harkins Slough Road (Hwy 1 to Green Valley Road)	Repair, reconstruct and/or upgrade pavement, bike lanes, sidewalks, transit facilities, signage and striping	\$1,150
SC-WAT-P80-WAT	Lake Avenue Underground Utilities	Underground existing overhead utilities.	\$4,200

Table C-6g: Santa Cruz County Transportation Demand Management Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
RTC 17SC	Ecology Action Transportation Employer Membership Program	Community organization that promotes alternative commute choices. Work with employers, incentives for travelers to get out of SOVs including: emergency ride home, interest-free bike loans, discounted bus passes. Avg cost: \$90K/yr. Coordinates with Bike to Work program.	\$1,375
SC-CO 50-USC	Santa Cruz County Health Service Agency - Traffic Safety Education	Ongoing education program to decrease the risk and severity of collisions. Includes bicycle and pedestrian programs: Community Traffic Safety Coalition, South County coalition and Ride n' Stride Bicycle/Pedestrian Education Program.	\$4,900
SC-EA-03a-USC	Bike Challenge +	Online tracking and encouragement platform to encourage and reward people to bike commute more often. Twice-a-year monthly bike challenge, year-round encouragement tools, bike commuter workshops, marketing, group rides, and data/survey collection.	\$3,500
SC-MTD-P42-MTD	Senior/Disabled/Low Income Fixed-Route Transit Incentives	Incentives to encourage fixed-route bus ridership. Includes existing discounts for Seniors and persons with disabilities. May include free/reduced rates for seniors during off-peak hours, free bus passes to ADA eligible persons, bus pass subsidies for low income riders transportation to employment, and other incentives to encourage use of fixed-route system.	\$19,500
SC-RTC 02a-RTC	Cruz511 TDM and Traveler Information	Transportation demand management including centralized traveler information system and ride matching services. Outreach, education and incentives; multimodal traveler information system on traffic conditions, incidents, road and lane closures; ride matching service for carpools, vanpools, and bicyclists; services and information about availability and benefits of all transportation modes, including sharing rides, transit, walking, bicycling, telecommuting, alternative work schedules, alternative fuel vehicles, and park-n-ride lots. Avg annual cost: \$315k.	\$3,540

**Table C-6g: Santa Cruz County Transportation Demand Management Projects
(Continued)**

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-RTC-15-RTC	Vanpool Incentive Program	Assist in start up and retention of vanpools. Includes financial incentives: new rider subsidies, driver bonuses, and empty seat subsidies. Also may include installation of wifi on vans. Avg Annual Cost: \$25k/yr.	\$570
SC-RTC-26-OTH	Bike To Work/School Program	Countywide education, promotion, and incentive program to actively encourage bicycle commuting and biking to school. Coordinates efforts with local businesses, schools, and community organizations to promote bicycling on a regular basis. Provides referrals to community resources. Avg annual cost: \$140K/yr-includes in-kind donations and staff time.	\$2,000
SC-RTC-33-VAR	Cabrillo College TDM Programs	Provide students and employees at all four Cabrillo College campuses with education, promotion, and incentives that support the use of sustainable transportation modes. Develop information, programs and services customized to meet the transportation needs of the Cabrillo College community. 'Provide Sustainable Transportation education, promotion, and Go Green program enrollment to Cabrillo College students and employees. Partner with Cabrillo staff and students to reduce SOV trips to the Aptos, Watsonville and Scotts Valley campuses. Provided targeted information and services to Cabrillo members.	\$1,360
SC-RTC-P48-VAR	Climate Action Transportation Programs	Projects that reduce greenhouse gas emissions through reducing vehicle trips and vehicle miles traveled, increasing fuel efficiency and expanding use of alternatively fueled vehicles. Includes comprehensive outreach and education campaigns, a countywide emergency ride home for those using alternatives, and TDM incentive programs: \$100k/year.	\$250
SC-RTC-P53-VAR	TDM Individualized Employer/Multiunit Housing Program	Implement individualized employer and multiunit housing TDM programs with incentives for existing development.	\$2,325

**Table C-6g: Santa Cruz County Transportation Demand Management Projects
(Continued)**

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-RTC-P54-RTC	School-Based Mobility/TDM Programs	Student transportation programs aimed at improving health and well being, transportation safety and sustainability and that facilitate mode shift from driving alone in a motor vehicle to active and group transportation.	\$1,875
SC-RTC-P56-RTC	Transportation Demand Management Ordinance and User Guide	Develop Model TDM Ordinance and User Guide to include provisions for both residential and non-residential projects and address program and facilities improvements in return for reductions in off-street parking requirements.	\$260
SC-UC-P32-UC	UCSC Bike Showers/Storage Lockers	Install showers and storage facilities to serve bicycle commuters to the University.	\$620
SC-UC-P52-UC	UCSC Bike Loan Program	Develop and implement a bike loan program for UC students.	\$1,030
SC-UC-P61-UC	Traveller Safety Education/Information Programs	Bike/pedestrian safety programs; light and helmet giveaways, safety classes, distracted driver programs, bus etiquette program.	\$560
SC-UC-P67-UC	Zimride Emergency Preparedness Database	Creating a new database through Zimride to have emergency response evacuation of UCSC campus.	\$310
SC-VAR-02-VAR	Project PASEO - Open Streets, Earn-a-Bike, Pop Up Bike Lanes, Slow Streets	Slow Streets temporary barricades and signage on neighborhood streets aimed at increasing space for walking and biking, reducing speeds and cut through traffic. Open Streets community events temporarily open roadways to bicycle and pedestrian travel only, diverting automobiles to other roadways. Earn-a-bike program provides bikes, tools, safety supplies, as well as bike repair, cycling safety, and nutrition education middle school students. Pop-up bike lanes is a temp demo of a protected bicycle lane. Open Streets: Santa Cruz, Watsonville, +; Earn-a-bike: middle schools; Pop-up Bike Lanes: Live Oak & Watsonville; Slow Streets: Unincorporated	\$2,950
SC-VAR-P04-VAR	Mobility Management Center	Centralized one-stop-shop for information and resources on specialized transportation options. May be combined with 511 and local senior information and assistance efforts. Implementing agency TBD. Est. annual cost: \$100-300k/yr.	\$7,750

**Table C-6g: Santa Cruz County Transportation Demand Management Projects
(Continued)**

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-VAR-P06-VAR	Carsharing Program	Program to assist people in sharing a vehicle for occasional use. Implementing Agency TBD, varies.	\$1,470
SC-VAR-P15-VAR	Transportation for Low Income Youth	Safe, reliable transportation services for foster care children to/from school. Avg annual cost: \$100k/yr.	\$2,580
SC-VAR-P17-VAR	Eco-Tourism - Sustainable Transportation	Provide sustainable transportation information, incentives and promotions to the estimated one million visitors to Santa Cruz County. Work with the Santa Cruz County Conference and Visitors Council, local lodgings, and tourist attractions.	\$515
SC-VAR-P19-VAR	School Safety Programs	Bicycle and walking safety education and encouragement programs targeting K-12 schools in Santa Cruz County including Ecology Action's Safe Routes to School and Bike Smart programs. Provide classroom and on the bike safety training in an age appropriate method. Provide a variety of bicycle, walking, busing and carpooling encouragement projects ranging from bike to school events, to incentive driven tracking, and educational support activities. Est. annual cost \$150k.	\$1,910
SC-VAR-P20-VAR	Public Transit Marketing	Initiatives that increase public transit ridership including discount passes, free fare days, commuter clubs, and promotional and marketing campaigns.	\$775

**Table C-6g: Santa Cruz County Transportation Demand Management Projects
(Continued)**

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-VAR-P24-VAR	Countywide Senior Driving Training	Coordinate and enhance current programs that help maturing drivers maintain their driving skills and provides transitional info about driving alternatives. (Current programs are run by AARP and CHP.)	\$820
SC-VAR-P26-VAR	Park and Ride Lot Development	Upgrade and maintain existing park and ride lots for commuters countywide. Secure additional park and ride lot spaces for motorized vehicles and bicycles. Long range plan: identify, purchase land, construct Park & Ride lots.	\$6,000
SC-VAR-P40-VAR	Santa Cruz County Open Streets	Community events promoting alternatives to driving alone as part of a sustainable, healthy, and active life-style. Temporarily opens roadways to bicycle and pedestrian travel only, diverting automobiles to other roadways.(Average cost ~ \$25k/event)	\$2,250
SC-WAT-P84-WAT	Pedestrian and Traffic Safety	Provide pedestrian and traffic safety improvements including striping, markers, signage, flashing beacons and curb extensions.	\$848

Table C-6h: Santa Cruz County ADA Transit Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CTSA-P01-OTH	Countywide Specialized Transportation	Non-ADA mandated paratransit and other specialized transportation service for seniors and people with disabilities. Includes medical service rides, Elderday, out-of-county rides, Sr. Meal Site, Taxi Script, and same day rides etc. Current avg annual need \$2.58M. Constrained=\$2M.	\$29,500
SC-CTSA-P03-OTH	Non-ADA Paratransit Service Expansion	Expansion of non-ADA paratransit system to meet needs of growing elderly and disabled populations. May include pre/post natal transport to medical appointments.	\$21,700
SC-CTSA-P04-OTH	Medically Fragile Specialized Transportation	Non-emergency same day transportation service for medically fragile individuals. Includes operations and capital.	\$5,000
SC-CTSA-P06-OTH	Medical Specialized Transportation for Veterans	Non-emergency medical transportation for veterans	\$6,500
SC-MTD-02-MTD	ADA Paratransit Vehicle Replacements	Replace buses/vans for ADA paratransit fleet (including Accessible Taxi program).	\$6,550
SC-MTD-P11-MTD	ADA Service Expansion	Add capacity to meet increased trip demand thru 2045. Assumes 2% increase/year starting in 2022.	\$4,040
SC-MTD-P30-MTD	ParaCruz Mobile Data Terminals/Radios	Replace mobile data terminals in vehicles.	\$360
SC-MTD-P43-MTD	Microtransit Pilot Program	Pilot project allowing smaller buses or vans to provide on-demand point-to-point trips in areas where all-day fixed-route service is not viable.	\$100
SC-MTD-P44-MTD	Inter-County Paratransit Connection	Establish paratransit connection location with Santa Clara County.	\$1,300
SC-MTD-P45-MTD	Transit/Paratransit Driver Emergency Training	Provide training equipment for drivers on new mobility devices (scooters, motorized wheelchairs) plus emergency training and biohazard container and clean-up kits for vehicles.	\$295
SC-MTD-P51-MTD	ADA Access Improvements	Add or improve ADA accessibility to all bus stops and METRO facilities.	\$3,872

Table C-6h: Santa Cruz County ADA Transit Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-VAR-P48-VAR	On-Demand Wheelchair Accessible Vehicle Program	TNC Access for All Program to implement SB1376 (Hill: 2018) which directed the CPUC to establish a program relating to accessibility of on-demand transportation services for persons with disabilities, including wheelchair users who need a wheelchair accessible vehicle (WAV), to be funded in-part by Transportation Network Companies (e.g. Lyft/Uber) that do not have WAV fleet. [constrained reflects CPUC forecasted funds=\$60k/yr]	\$3,000

Table C-6i: Santa Cruz County Transit Improvement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CAP-P15-CAP	Capitola Jitney Transit Service	Purchase and operate local transit service.	\$1,030
SC-CAP-P18-CAP	Capitola Intra-City Rail Trolley	Construct & Operate Weekend Rail Trolley Service. Project includes installation of 3 stations.	\$14,460
SC-MTD-P12-MTD	Hwy 17 Express Service Restoration and Expansion	Restore Hwy 17 Express service to FY16 levels, then expand service 2% annually. Restore \$353K/yr operating plus 2% annually plus capital costs (2 buses)	\$7,600
SC-MTD-P14-MTD	Local Transit Service Restoration and Expansion	Restore local service to FY16 levels, then expand service 2% annually. Restore \$7.0M/yr operating plus 2% annually plus capital costs (16 buses)	\$139,000
SC-MTD-P15-MTD	Bus Rapid Transit	Transit signal priority, queue jumps, and enhanced stations to speed up major cross-county trunk routes.	\$36,500
SC-MTD-P24-MTD	Small Bus Fleet	Purchase smaller shuttle buses, possibly autonomous, for first mile/last mile connections. Cost currently unknown.	\$1,700
SC-MTD-P38-MTD	Maintenance Facility Expansion	Property acquisition, design, and construction of maintenance facility expansion.	\$15,850
SC-MTD-P53-MTD	Park and Ride Facilities	Fund purchase and construction or lease of parking areas for commuter bus patrons, either surface lot or parking structure.	\$29,400
SC-RTC-25-RTC	Recreational Rail Infrastructure	Seasonal passenger rail service on Santa Cruz Branch rail line. Infrastructure needed for the service is listed here (e.g. platforms, sidings, pedestrian & disabled access, rail vehicles). Unsubsidized operations will be provided by a private operator and operating costs are therefore not included here. All costs are estimated.	\$5,340

Table C-6i: Santa Cruz County Transit Improvement Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-RTC-P02-RTC	Public Transit on Watsonville-Santa Cruz Rail Corridor	Design, construction, and operation of public transit between Santa Cruz and Watsonville in the rail corridor. May be a joint project with the SCCRTC, SCMTD, and local jurisdictions. Annual op cost est: \$25M/yr; Capital: \$475M (Total cost reflects 2021 TCAA est. for rail). Pending final outcome of Transit Corridor Alternatives Analysis and environmental review. Cost shown includes 15 years of service during RTP period; Constrained=environmental/prelim. design assessment of possible future public transit system in the rail corridor right-of-way.	\$825,000
SC-UC-P22-UC	Alternative Fuel/Electric Shuttle Vehicles	Capital acquisition of vehicles/conversion of shuttles to EV.	\$10,330
SC-UC-P46-UC	East Collector Transit Hub	New transit hub at East Collector (East Remote) lot.	\$5,170
SC-UC-P48-UC	UCSC - Metro Station Bus Rapid Transit Improvements	Bus Rapid Transit Improvements between Metro Station, Bay Street Corridor and UCSC roadways.	\$5,170

Table C-6j: Santa Cruz County Transit Operations Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-MTD-P18-MTD	Commuter/Subscription Bus Program	Capital and operating for subscription buses to areas not currently served by express buses (similar to large vanpool).	\$6,500
SC-MTD-P21-MTD	Signal Priority/Pre-Emption for Buses	Enable coach operators to actuate traffic signals to prolong green or change red lights to improve transit running time.	\$2,070
SC-MTD-P54-MTD	South County Operations and Maintenance Facility	Acquisition of property and construction of second operations and maintenance facilities to better serve South County.	\$50,000
SC-MTD-P55-MTD	Customer IT amenities	Upgrade Hwy 17 Wi-Fi and expand to local routes	\$1,010
SC-MTD-P57-MTD	Bus on Shoulders Operations	Operations and transit vehicles to utilize freeway shoulders and/or auxiliary lanes to bypass congestion on Highway 1 and possibly Highway 17 to speed inter-city bus service.	\$12,000
SC-MTD-P58-MTD	Metro Rebranding	Develop improved, mobile-friendly website, and marketing program to establish consistent brand with uniform signage, letterhead, ads.	\$500
SC-RTC-P58-RTC	Real-Time Transit Info	Develop and maintain system for disseminating real time transit arrival and departure information to Santa Cruz Metro users. To be developed in coordination with Santa Cruz Metro.	\$300
SC-VAR-P41-VAR	Transportation for Low Income Families	Transportation service for low income families with children. Includes medical service rides, out-of-county rides, volunteer rides, taxi script, ride to work program, etc. Current avg annual need \$.5M. Constrained=\$0M.	\$11,000
SC-VAR-P42-VAR	Transportation for Caregivers of Seniors/People with Disabilities	Transportation service for caregivers of seniors or people with disabilities. Including, but not limited to programs such as, volunteer rides, taxi script, ride to work program. Current avg annual need \$.5M. Constrained=\$0M.	\$11
SC-VAR-P43-VAR	Transit Service to San Jose Airport	Provide transit service to San Jose airport from Santa Cruz. Current average annual need \$0.5 M	\$11,000
SC-VC-P1-OTH	Volunteer Center Transportation Program	Program providing specialized transportation to seniors and people with disabilities. Constrained = existing TDA allocations.	\$2,110
SC-WAT-P27-WAT	Watsonville Shuttle	Year round public transit service.	\$300

Table C-6k: Santa Cruz County Transit Maintenance and Rehabilitation Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-CTSA-P07-OTH	Lift Line EV Modernization Project	Replace 3 gas-powered vehicles with 3 electric vehicles in order to extend the useful life of the program while promoting safety, increasing access to vital transportation services, and reducing greenhouse gas emissions for eligible community members with limited mobility.	\$560
SC-MTD-13-MTD	Santa Cruz Metro Center/Pacific Station Renovation	Renovate Pacific Station or construct new transit center in alternate location as part of development partnership with the City of Santa Cruz.	\$15,000
SC-MTD-P04-MTD	Bus Replacements	Replace fleet at the end of normal bus lifetime (approximately every 12 years; \$700 each for local fixed route; \$900k each for Hwy 17 Over the Road coaches). \$1.25M for ZEB	\$63,900
SC-MTD-P20-MTD	Bikes on Buses Expansion	Add additional space for bikes on articulated buses when/if METRO purchases or leases 60-ft articulated buses.	\$60
SC-MTD-P27-MTD	Hwy 1 Express Buses	Hwy 1 express bus replacements - 6 Buses. Replace every 12 years.	\$11,700
SC-MTD-P29-MTD	Solar Panels for Souza Operations Facility	Energy reduction through installation of solar panels on the new Judy K. Souza Operations Facility.	\$2,000
SC-MTD-P32-MTD	Non-Revenue Vehicle Replacement	Replace support vehicles.	\$2,000
SC-MTD-P33-MTD	Transit Security and Surveillance Systems	Enhance passenger safety and facilities security. Emergency response systems.	\$1,140
SC-MTD-P35-MTD	Transit System Technology Improvements	Hardware and software for essential transit operations and administration: computer servers, networking equipment, telephones, personal computers, digital ID processing equipment, office equipment, and software. Periodic replacement at end of useful life.	\$5,000
SC-MTD-P36-MTD	Metro Facilities Repair/Upgrades	Maintain and upgrade facilities.	\$1,970
SC-MTD-P46-MTD	Watsonville Transit Center Improvements	Minor upgrades to Watsonville Transit Center.	\$1,030

Table C-6k: Santa Cruz County Transit Maintenance and Rehabilitation Projects (Continued)

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
SC-MTD-P47-MTD	Electric Non-Fleet Vehicles and Charging Infrastructure	Replace non-revenue vehicles to EV. Install Level II chargers.	\$5,000
SC-MTD-P48-MTD	EV Fast Charging Stations	Install 5 electric vehicle charging stations at transit centers.	\$1,030
SC-MTD-P56-MTD	Replacement of Watsonville Transit Center	Replacement transit center at existing or new location.	\$25,000
SC-MTD-P61-MTD	South County Zero-Emissions Operating and Maintenance Facility	Construct maintenance facility on 9.8 acre lot to meet state of California's clean energy mandates and gradually convert fleet to zero emission busses with goal for full transition by 2040.	\$50,000
SC-RTC-P41-RTC	Rail Line: Freight Service Upgrades	Upgrade rail line to FRA Class 2 to a condition for reasonable ongoing maintenance into the future. Upgrade crossings, replace jointed rail with continuously welded rail, upgrade signals and replace ties.	\$25,000
SC-UC-P51-UC	Bike Shuttle Vehicle Acquisition	Acquire more alt fueled vehicles for bike shuttle (and possible expansion).	\$520
SC-UC-P64-UC	Alternative Fuel Fleet Vehicles	Purchase and upgrade fleet vehicles to alt. fueled vehicles (refuse trucks, street sweepers, fleet cars, etc.)	\$2,600

Table C-6I: Santa Cruz County Transportation System Mangement Projects

AMBAG ID	PROJECT	PROJECT DESCRIPTION	Total Cost (\$ 000s)
RTC 01SC	Freeway Service Patrol (FSP) on Hwy 1 and Hwy 17	Maintain and expand tow truck patrols on Highways 1 and 17. Work with the CHP to quickly clear collisions, remove debris from travel lanes, and provide assistance to motorists during commute hours to keep incident related congestion to a minimum and keep traffic moving. Avg need: \$300k/yr constrained (some from SB1); \$430k/yr total cost.	\$3,250
SC-CHP-P01-CHP	Hwy 17 Safety Program	Continuation of Highway 17 Safety Program in Santa Cruz County at \$100/year. Includes public education and awareness, California Highway Patrol (CHP) enhancement, pilot cars, electronic speed signs.	\$3,750
SC-CHP-P02-CHP	Traffic Management	Patrol of state route system and unincorporated roadways aimed at minimizing traffic collisions and traffic delays; and provide assistance to motorists. COST EST TBD.	\$1
SC-CHP-P03-CHP	Hwy 129 Safety Program	Added CHP enforcement and public education campaign on Highway 129.	\$500
SC-CT-P01-RTC	Hwy 1 Ramp Metering: Southern Sections	Reconfigurations of ramps and installation of ramp meters at interchanges from Hwy 129/Riverside Drive to Mar Monte Avenue.	\$20,600
SC-MTD-P06-MTD	Transit Technological Improvements	IT software and hardware upgrades for scheduling, customer service and planning systems. Upgrades every 5 years.	\$2,670
SC-RTC 34-RTC	Hwy 1 Ramp Metering: Northern Sections Between San Andreas Road and Morrissey Blvd	Reconfiguration of ramps and local streets to allow for ramp metering and installation of ramp meters. Could be expensed under a separate stand alone project (\$6.7 M)	\$2
SC-SC-P122-SCR	Ocean Sreet Corridor Multiuse Transit Lane	Consider restricting parking to develop business access and transit (BAT) lane to serve tourism and improving transit facilities.	\$410
SC-VAR-P11-VAR	Local Arterial ITS Infrastructure	ITS (Intelligent Transportation Systems): advanced electronics and information technologies to increase the safety and efficiency of the surface transportation system, including vehicle detection devices along major arterials in urbanized areas to alert motorists of incidents.	\$620
SC-VAR-P34-VAR	Transit Priority	Install transit queues at major intersections.	\$2,585



Public Participation

Introduction

Solutions to our region's transportation needs require a comprehensive planning effort that coordinates land use and transportation and develops an integrated, multimodal transportation system. The 2045 Metropolitan Transportation Plan (MTP) and its Sustainable Community Strategy (SCS) contain specific public policies and strategies, as well as projects and programs aimed at meeting the diverse mobility needs of our growing and changing Monterey Bay region.

A critical component in preparing the 2045 MTP/SCS was to provide guidance in the structuring of regional transportation planning processes to ensure that, to the greatest extent possible, interagency consultation and public participation were an integral and continuing part of the regional transportation decision making process. The participation policies and procedures described below were structured to enable all participants the ability to express their genuine regional values and interests in the shaping and implementation of regional policies and decisions regarding the transportation system.

Development of the 2045 MTP/SCS has been a multi-year effort that began in 2019. A comprehensive program of public involvement activities was a key part of the process. Extensive outreach with local government officials was conducted, as well as a public participation plan that included numerous community workshops and meetings, telephone and online surveys.

The Draft 2045 MTP/SCS and the Draft Environmental Impact Report were released for public review and comment on November 22, 2021. The public comment period closed on January 31, 2022.

Following are highlights of public participation and consultation activities that occurred through the process to date:

Ten community workshops held in cities throughout the greater Monterey Bay region in Santa Cruz, Monterey and San Benito counties.

A project website (<https://www.ambag.org/plans/2045-metropolitan-transportation-plan-sustainable-communities-strategy>) which served as the online portal to information about the project and access to surveys and mapping data.

- Implementation of a GIS-based mapping system called AMBAG Regional Data Viewer which provides for the first time a regionwide spatial mapping system that includes land use, transportation and environmental features, and is available to public organizations, stakeholders and the general public.
- Preparation of handout materials, flyers, information sheets, frequently asked questions (FAQs), etc., many of which were prepared both in English and Spanish.
- Thirteen public meetings with the AMBAG Board, also at key milestone events throughout the planning process.
- Twelve meetings with the Planning Directors Forum (PDF), comprised of planning directors and their staff from the three Monterey Bay area counties and 18 cities.
- More than 20 meetings with technical advisory committees (TACs) within the three Monterey Bay area counties.
- More than 80 one-on-one meetings with local jurisdiction's staff and elected officials.
- Focused one-on-one meetings with various stakeholders, and community based interest groups to help educate and inform them about the planning process and answer questions they raised.

The following is a description of each component of the public participation and consultation process that was involved as part of the 2045 MTP/SCS planning process. Information regarding the effectiveness of the public participation strategies will be considered in the next update of the Public Participation Plan.



Screenshot of the Homepage

Tools and Resources

Project Website

The project website (<https://www.ambag.org/plans/2045-metropolitan-transportation-plan-sustainable-communities-strategy>) is the central portal for information about the project and upcoming events. The website address was provided on all outreach materials and has been updated regularly to maintain current content.

GIS Data Portal

AMBAG launched a new GIS Portal leveraging the latest ESRI technology in 2020, replacing our previous GIS Viewer. The GIS Portal allows jurisdictions to log in and edit data for inclusion in our long-range plan and also provides the ability for the public to view geospatial data in a live and interactive format. The Portal hosts spatial data holdings in a standardized, dynamic and accessible format. AMBAG compiled GIS datasets to show transportation project, managing agencies and the types of sensitive environmental or other resources are near projects to help them prepare Environmental Impact Reports (EIRs) and design projects which cause the least impact to these resources. AMBAG decided the best process was to leverage GIS Portal technology for staff to work with the 18 cities and three counties to enhance technical support amongst our member jurisdictions and introduce the ability to quickly update land use data and opportunity area focused growth. AMBAG staff is also working to incorporate the data captured in GIS Portal into Urban Footprint as a key component in MTP/SCS's public participation process.

Workshops

Two series of workshops each were held throughout the tri-county region at key milestones in person. The workshops were designed in an open house format with a variety of stations to provide one-on-one discussion and to create a more comfortable and meaningful environment for participants. Virtual workshops provided an opportunity for attendees to provide input via polling questions on a variety of potential SCS strategies.

Materials were provided in both English and Spanish and translation services were available at most of the workshops.

Flyers and Press Releases

Flyers were prepared in English and Spanish for the two workshop series. These flyers were distributed to local agencies and those who signed up for email updates on the website. Copies of the flyers are included as attachments at the end of this appendix. A press release was also sent to local television, radio, and newspaper media outlets.

Stakeholder Contact Lists

A master stakeholder contact list was maintained for distribution of press releases, flyers and project updates. This list included members of the AMBAG Board, the Planning Directors Forum and other related groups. In addition, media outlets, local organizations and workshop and survey participants who provided a valid email address were included. A complete list of stakeholder groups is included in the AMBAG 2019 Public Participation Plan. The following is a summary of the major media outlets targeted for promotion of workshops.

- Access Monterey Peninsula
- Carmel Pine Cone
- Good Times Weekly
- Greenfield News
- Hollister Freelance
- King City Rustler
- KION
- KSBW
- Monterey County Herald
- Monterey County Weekly
- Pinnacle News
- Register Pajaronian
- Santa Cruz Sentinel
- Scotts Valley Banner/Valley Press

- Soledad Bee
- South County Newspapers, LLC
- The Salinas Californian
- Time Publishing Group, Inc.

Workshop Series 1

The first workshop series was held in January 2020 and was set up to inform participants of the development of the 2045 MTP/SCS and scoping meeting for the environmental impact report.

The following is a listing of the workshop locations and dates:

- Live Oak Community Room (January 22)
- County of San Benito Board of Supervisors Chambers (January 23)
- Marina Library (January 29)

Workshop Series 2

The second workshop series was held virtually in May 2021 and was set up to solicit input on various SCS strategies for the MTP/SCS. Participants were asked a series of questions regarding their support for various environmental, housing, transportation and economic development strategies that could be included in the 2045 MTP/SCS. A short online survey to gather feedback on potential new strategies was also available online for those who were unable to attend a workshop. The workshop flyer (in English/Spanish) is attached.

Locations

The following is a listing of the workshop dates:

- May 10
- May 18
- May 19

Workshop Series 3

The third workshop series was held virtually in January 2022 and was set up to solicit feedback and public comment on the Draft 2045 MTP/SCS and Draft Environmental Impact Report. The public workshop/hearing flyer (in English/Spanish) is attached. Four public workshops/hearings were held on:

- January 12
- January 19
- January 24
- January 27

Consultation

A variety of committees and boards were consulted throughout the planning process and at key milestones to solicit feedback, provide project updates, and relay community input from the workshops and surveys. These committees and boards are made up of elected officials, staff from local jurisdictions and agencies, local leaders and organizers, and members of the general public.

AMBAG Board of Directors

The AMBAG Board of Directors consists of local elected officials that have been appointed by their respective city council or board of supervisors. Each member city has one representative on the AMBAG Board and each member county has two.

The AMBAG Board meets monthly and sets policy. Day-to-day oversight is provided by the Executive Director, who is appointed by and serves at the pleasure of the Board of Directors.

The AMBAG Board met 13 times throughout the planning process to date, to receive project updates, provide policy direction, determine scenarios and ultimately to adopt the MTP/SCS.

Planning Directors Forums

The Planning Directors Forum (PDF) consists of planning directors and staff from the 18 cities, three counties, three regional transportation planning agencies, and AMBAG. The PDF meets regularly to address regional land use and transportation planning issues. The PDF met 12 times throughout the planning process and at key milestones to identify priorities, help develop SCS strategies, review draft workshop materials and to receive project updates including feedback from the community workshops.

Regional Transportation Planning Agencies

The Regional Transportation Planning Agencies (RTPAs) consist of agency staff and board members, including staff from local jurisdictions, elected officials and appointed members. The RTPA boards of directors set policy and provide a source of funding for transportation planning projects within each county. The three RTPAs' Boards discussed RTP related items such as project updates, project identification, identifying funding sources and priorities.

Technical Advisory Committees

The Technical Advisory Committees (TACs) are made up of staff from local jurisdictions and agencies, including local transit service providers and the RTPAs. The TACs review and provide technical guidance and advice on transportation projects and programs within each county, and makes recommendations to the RTPA boards or directors. AMBAG staff met with the TACs more than 20 times at key milestones throughout the planning process to confirm transportation priorities, projects and funding sources.



WORKSHOP

What will the Monterey Bay region look like in 2045?

The Association of Monterey Bay Area Governments (AMBAG) invites you to come learn about new tools to help shape our future together in collaborative and positive ways! Get involved and let us know what you think as we move forward to 2045.

By 2045, another 107,500 people will likely live in our region. We are also forecasted to create nearly 42,000 new homes and more than 65,000 new jobs!

Where will we live? Where will we work? How can we as a region make it easier for our residents to find appropriate housing and get to jobs and other destinations? And how can we best minimize impacts to the environment and maintain a quality of life that is the envy of visitors to our region?

Each virtual workshop will begin with a presentation describing the Sustainable Communities Strategy and the potential new strategies to help local communities plan for a more sustainable future and high quality of living. During the presentation, various questions will be asked in order to gather more input about housing, economic and transportation options for our region.

SCHEDULE

Monday, May 10
Monterey County
 Virtual Workshop
 5:30 p.m. - 7:00 p.m.

Tuesday, May 18
Santa Cruz County
 Virtual Workshop
 5:30 p.m. - 7:00 p.m.

Wednesday, May 19
San Benito County
 Virtual Workshop
 5:30 p.m. - 7:00 p.m.



To register for one of the workshops, visit
www.ambag.org





TALLER

¿Cómo será la región de la Bahía de Monterey en 2045?

La Asociación de Gobiernos del Área de la Bahía de Monterey (AMBAG) lo invita a aprender sobre las nuevas herramientas para ayudar a dar forma a nuestro futuro juntos de forma colaborativa y positiva. Participe y díganos lo que piensa mientras avanzamos hacia 2045.

En 2045, es probable que otras 107,500 personas vivan en nuestra región. También se prevé la creación de casi 42,000 nuevas viviendas y más de 65,000 nuevos puestos de trabajo.

¿Dónde viviremos? ¿Dónde trabajaremos? ¿Cómo podemos, como región, hacer que sea más fácil para nuestros residentes encontrar una vivienda adecuada, y poder ir al trabajo y a otros destinos? ¿Cuál es la mejor manera de minimizar el impacto en el medio ambiente y mantener una calidad de vida que sea la envidia de los visitantes de nuestra región?

Cada taller virtual comenzará con una presentación en la que se describirá la Estrategia de Comunidades Sostenibles y las posibles nuevas estrategias para ayudar a las comunidades locales a planificar un futuro más sostenible y una alta calidad de vida. Durante la presentación, se harán distintas preguntas para recoger más información sobre las opciones de vivienda, economía y transporte para nuestra región.

PROGRAMA

Lunes 10 de mayo
Condado de Monterey
 Taller virtual
 5:30 p. m.- 7:00 p. m.

Martes 18 de mayo
Condado de Santa Cruz
 Taller virtual
 5:30 p. m.- 7:00 p. m.

Miércoles 19 de mayo
Condado de San Benito
 Taller virtual
 5:30 p. m.- 7:00 p. m.



Para inscribirse en uno de los talleres, visite
www.ambag.org



Public Workshop and Hearing on the Draft 2045 MTP/SCS and Draft EIR

Attend a virtual workshop and public hearing on AMBAG's Draft 2045 Metropolitan Transportation Plan and Sustainable Communities Strategy (MTP/SCS) and Draft Environmental Impact Report (EIR). Opportunity to provide comments on the Draft Plan and EIR will occur during the public hearing portion of the meeting.

Can't attend the virtual workshop? Send comments by email, info@ambag.org, or by mail, 24580 Silver Cloud Ct, Monterey, CA 93940. The public comment period closes on January 31, 2022.

Copies of the Draft Plan and EIR are available for download at www.ambag.org

SCHEDULE

Wednesday, January 12
AMBAG Board of Directors
6:00 p.m.

Wednesday, January 19
6:00 p.m. - 7:30 p.m.

Monday, January 24
6:00 p.m. - 7:30 p.m.

Thursday, January 27
6:00 p.m. - 7:30 p.m.



To register for one of the
workshops, visit
www.ambag.org



PROGRAMA

Miércoles 12 de enero
Consejo de administración
de AMBAG
6:00 p. m.

Miércoles 19 de enero
6:00 p. m. a 7:30 p. m.

Lunes 24 de enero
6:00 p. m. a 7:30 p. m.

Jueves 27 de enero
6:00 p. m. a 7:30 p. m.



Para inscribirse en uno de
los talleres, visite
www.ambag.org

Taller y audiencia públicos sobre el Borrador 2045 MTP/ SCS y el Borrador EIR

Asista a un taller virtual y a una audiencia pública sobre el Borrador del Plan de transporte metropolitano y la Estrategia de comunidades sostenibles para 2045 (Metropolitan Transportation Plan and Sustainable Communities Strategy, MTP/SCS) de AMBAG y el Borrador del informe de impacto ambiental (Draft Environmental Impact Report, EIR). Tendrá la oportunidad de hacer comentarios sobre el Borrador del plan y el EIR durante la parte de la audiencia pública de la reunión.

¿No puede asistir al taller virtual? Envíe sus comentarios por correo electrónico, info@ambag.org, o por correo, 24580 Silver Cloud Ct, Monterey, CA 93940. El período de comentarios públicos cierra el 31 de enero de 2022.

Las copias del Borrador del plan y del EIR están disponibles para descargar en www.ambag.org



E

SCS Documentation

2045 MTP/SCS Preferred Scenario

The preferred scenario was selected based on a combination of the two hybrids. Projects from both the hybrids were included in a mix that provides for investment in safety, maintenance, operations, transit, complete streets, and active transportation. On the land use side the preferred scenario focuses on mixed use infill development in commercial corridors with high quality transit. See Chapter 4 of the 2045 MTP/SCS for a complete description of the preferred scenario and Sustainable Communities Strategy.

Required Elements of the SCS

There are many components to the SCS outlined in the legislation. Below is a table that outlines each of the requirements of SB 375 and provides an explanation of how those requirements are met by this MTP/SCS.

2045 MTP/SCS Technical Update

The 2045 MTP/SCS is a technical update to the 2040 MTP/SCS. AMBAG, through the public participation and engagement process, updated the best performing scenarios to move forward in the scenario development process. For more information on the preferred scenario, see Chapter 4.

Table E-1: SB 375 Requirements Checklist

Required Element	Addressed
CGC Section 65080(b) (2).(B) Each metropolitan organization shall prepare a sustainable communities strategy, subject to the requirements of Part 450 of Title 23 of, and Part 93 of Title 40 of, the Code of Federal Regulations, including the requirement to utilize the most recent planning assumptions considering local General Plans and other factors.	The MTP/SCS complies with all requirements. Reference: 2045 MTP/SCS Chapter 4
CGC Section 65080(b) (2).(B) i. Identify the general location of uses, residential densities, and building intensities within the region.	The SCS identifies the future land use pattern of the AMBAG region in Figures 4-1 through 4-3. Residential densities and building intensities are determined by Development Types, which are made up of information relating to the characteristics of the landscape, including jobs and housing density, urban design, and mix of land uses. Reference: 2045 MTP/SCS Chapter 4 2045 MTP/SCS Appendix F
CGC Section 65080(b) (2).(B) ii. Identify areas within the region sufficient to house all the population of the region, including all economic segments of the population, over the course of the planning period of the regional transportation plan taking into account net migration into the region, population growth, household formation and employment growth.	The SCS identifies areas sufficient to house the entire population in the region in Table 4-2. Projected capacity for these areas utilized the Integrated Growth Forecast for population, jobs and households as contained in Appendix A. Reference: 2045 MTP/SCS Chapter 4 2045 MTP/SCS Appendix A
CGC Section 65080(b) (2).(B) iii. Identify areas within the region sufficient to house an eight-year projection of the regional housing need for the region pursuant to Section 65584.	The 2045 MTP/SCS identifies areas sufficient to house an eight-year projection of the regional housing need in Table 4-2. Reference: 2045 MTP/SCS Chapter 4
CGC Section 65080(b) (2).(B) iv. Identify a transportation network to service the transportation needs of the region.	The 2045 MTP/SCS identifies the regional transportation network in Figures 2-1 through 2-4. Detailed descriptions of AMBAG's transportation network are found in Chapter 2. Reference: 2045 MTP/SCS Chapter 2

Table E-1: SB 375 Requirements Checklist (Continued)

Required Element	Addressed
CGC Section 65080(b) (2).(B) v. Gather and consider the best practically available scientific information regarding resource areas and farmland in the region as defined in subdivisions (a) and (b) of Section 65080.0.1	The MTP/SCS lists sources for the best available scientific information regarding resource areas and farmland in the region and identifies these areas in Figures 4-7 through 4-9. Reference: 2045 MTP/SCS Chapter 4
CGC Section 65080(b) (2).(B) vi. Consider the state housing goals specified in Sections 65580 and 65581.	The MTP/SCS considers the state housing goals as specified in Sections 65580 and 65581. Reference: 2045 MTP/SCS Chapter 4
CGC Section 65080(b) (2).(B) vii. Set forth a forecasted development pattern for the region, which, when integrated with the transportation network, and other transportation measures and policies, will reduce the greenhouse gas emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the greenhouse gas emission reduction targets approved by the state board.	Figures 4-1 through 4-3 of the MTP/SCS identifies the forecasted development pattern for the region. Along with the identified transportation network in Figures 4-7 through 4-9, the identified land use pattern exceeds the GHG emission reduction targets of 0% in 2020 and 5% in 2035. Detailed analysis and performance results of the integrated land use pattern and transportation network and strategies are found in Chapter 5. Reference: 2045 MTP/SCS Chapters 4 and 5
CGC Section 65080(b) (2).(B) viii. Allow the regional transportation plan to comply with Section 176 of the federal Clean Air Act (42 U.S.C. Sec. 7506).	The MTP/SCS complies with this requirement. Reference: 2045 MTP/SCS Chapter 4
CGC Section 65080(b) (2).(D) The metropolitan planning organization shall conduct at least two informational meetings in each county within the region for members of the board of supervisors and city councils on the sustainable communities strategy and alternative planning strategy.	AMBAG has adopted a public participation plan that includes at least two informational meetings in each county for members of city councils and boards of supervisors. Reference: 2045 MTP/SCS Chapter 6 2045 MTP/SCS Appendix D
CGC Section 65080(b) (2).(E) Each metropolitan planning organization shall adopt a public participation plan, for development of the sustainable communities strategy and an alternative planning strategy, if any.	AMBAG has adopted a public participation plan. Reference: 2045 MTP/SCS Chapter 6

Table E-1: SB 375 Requirements Checklist (Continued)

Required Element	Addressed
(i) Outreach efforts to encourage active participation of a broad range of stakeholder groups in the planning process, consistent with the agency's adopted Federal Public Participation Plan, including, but not limited to, affordable housing advocates, transportation advocates, neighborhood and community groups, environmental advocates, home builder representatives, broad-based business organizations, landowners, commercial property interest, and homeowner associations.	The public participation plan details planning efforts that comply with and exceed the requirements. AMBAG met extensively with partner agencies and non-profit, advocacy, neighborhood and community groups beginning with target setting consultation and continuing through the workshop process. Reference: 2045 MTP/SCS Chapter 6 2045 MTP/SCS Appendix D
(ii) Consultation with congestion management agencies, transportation agencies, and transportation commissions.	The public participation plan includes consultation with these agencies. Reference: 2045 MTP/SCS Chapter 6 2045 MTP/SCS Appendix D
(iii) Workshops throughout the region to provide the public with the information and tools necessary to provide clear understanding of the issues and policy choices. At least one workshop shall be held in each county in the region. For counties with a population greater than 500,000, at least three workshops shall be held. Each workshop, to the extent practicable shall include urban simulation computer modeling to create visual representation of the sustainable communities strategy and the alternative planning strategy.	The public participation plan details planning efforts that comply with and exceed the requirements. AMBAG held seven workshops throughout the region, in addition to numerous local agency planning sessions and coordination with a Technical Advisory Committee which included representatives of each RTPAs. Reference: 2045 MTP/SCS Chapter 6 2045 MTP/SCS Appendix D
(v) At least three public hearings on the draft sustainable communities strategy in the regional transportation plan and alternative planning strategy, if one is prepared. If the metropolitan transportation organization consists of a single county, at least two public hearings shall be held. To the maximum extent feasible, the hearings shall be in different parts of the region to maximize the opportunity for participation by members of the public throughout the region.	The public participation plan includes at least three public hearings on the Draft 2045 MTP/SCS. Five public hearings were held on the Draft 2045 MTP/SCS. Reference: 2045 MTP/SCS Chapter 6 2045 MTP/SCS Appendix D
(vi) A process for enabling members of the public to provide a single request to receive notices, information and updates.	The public participation plan includes a process for members of the public to provide a single request to receive notices, information, and updates on the 2045 MTP/SCS. Reference: 2045 MTP/SCS Chapter 6 2045 MTP/SCS Appendix D

Table E-1: SB 375 Requirements Checklist (Continued)

Required Element	Addressed
CGC Section 65080(b) (2).(F) In preparing a sustainable communities strategy, the metropolitan planning organization shall consider spheres of influence that have been adopted by the local agency formation commissions within its region.	AMBAG’s Growth Forecast considers the spheres of influence adopted by the local agency formation commission. Reference: 2045 MTP/SCS Chapter 4 2045 MTP/SCS Appendix A
CGC Section 65080(b) (2).(G) Prior to adopting a sustainable communities strategy, the metropolitan planning organization shall quantify the reduction in greenhouse gas emissions projected to be achieved by the sustainable communities strategy and set forth the difference, if any, between the amount of that reduction and the target for the region established by the state board.	The MTP/SCS complies with this requirement. Reference: 2045 MTP/SCS Chapter 4 2045 MTP/SCS Appendix F
CGC Section 65080(b) (2).(J) Neither a sustainable communities strategy nor an alternative planning strategy regulates the use of land, nor, except as provided by subparagraph (I), shall either one be subject to any state approval. Nothing in a sustainable communities strategy shall be interpreted as superseding the exercise of the land use authority of cities and counties within the region.	The MTP/SCS complies with this requirement.
Nothing in this section requires a metropolitan planning organization to approve a sustainable communities strategy that would be consistent with Part 450 of Title 23 of, or Part 93 of Title 40 of, the Code of Federal Regulations and any administrative guidance under those regulations. Nothing in this section relieves a public or private entity or any person from compliance with any other local, state, or federal law.	The MTP/SCS complies with this requirement.

F Regional Travel Demand Model and Land Use Model Documentation



Introduction

The Association of Monterey Bay Area Governments (AMBAG) is the federally designated Metropolitan Planning Organization (MPO) for the tri-county Monterey Bay Area. To carry out Metropolitan Transportation Planning activities, AMBAG works closely with the Santa Cruz County Regional Transportation Commission (SCCRTC), the Transportation Agency for Monterey County (TAMC), the Council of San Benito County Governments (SBtCOG), the Monterey Bay Air Resources District (MBARD), Monterey-Salinas Transit (MST), the Santa Cruz Metropolitan Transit District (METRO), Caltrans, Federal Highway Administration (FHWA), Federal Transit Administration (FTA) and all local jurisdictions (18 cities and 3 counties) within the tri-county Monterey Bay Area.

The Monterey Bay Area constitutes California's North Central Coast Air Basin. Situated between the San Francisco Bay Area to the north and San Luis Obispo County to the south, it spans a total of 6,000 square miles. However, urbanized areas constitute less than 150 square miles.

Developing the 2045 Metropolitan Transportation Plan (MTP) and Sustainable Communities Strategy (SCS)

The Metropolitan Transportation Plan (MTP) has a horizon year of 2045 and is scheduled for adoption by the AMBAG Board of Directors in June 2022. One of the first steps in the development of the 2045 MTP/SCS was to evaluate and update the stated goals and objectives from the 2040 MTP/SCS. The AMBAG Board of Directors approved updated goals and policies as well as accepted updated performance measures at its February 2020 meeting. The performance measures were used to evaluate alternative transportation/land use scenarios and relate to each of the goal areas which are as follows:

- Access and Mobility – Provide convenient, accessible, and reliable travel options while maximizing productivity for all people and goods in the region.
- Economic Vitality – Raise the region's standard of living by enhancing the performance of the transportation system.
- Environment – Promote environmental sustainability and protect the natural environment.
- Healthy Communities – Protect the health of our residents; foster efficient development patterns that optimize travel, housing and employment choices and encourage active transportation.
- Social Equity – Provide an equitable level of transportation services to all segments of the population.
- System Preservation and Safety – Preserve and ensure a sustainable and safe regional transportation system.

AMBAG, in coordination with the Regional Transportation Planning Agencies (RTPAs), developed revenue projections and project costs.

The MTP is supplemented by the three county level Regional Transportation Plans (RTPs) prepared by SBtCOG, SCCRTC and TAMC. Therefore, the updates to all four plans, including goals and objectives, transportation project evaluation criteria, revenue projections, etc. were prepared to be consistent with each other.

The Sustainable Communities Strategy (SCS) is an element of the MTP, as required by Senate Bill 375 and shows how regional greenhouse gas (GHG) targets will be achieved through efficient development patterns, infrastructure investments, transportation measures, and policies that are determined to be feasible. The regional GHG targets are measured from a 2005 baseline and for the AMBAG region are a three percent per capita increase by 2020 and a five percent per capita reduction by 2035. If the SCS had not met regional GHG targets, an Alternative Planning Strategy (APS) could have been developed to demonstrate what alternative scenario and additional measures would be needed in order for the region to meet its GHG target.

Development of the Draft 2045 MTP/SCS

In order to evaluate various combinations of transportation and land use strategies that could lead to achieving the GHG targets adopted by the California Air Resources Board (CARB) for the tri-county region, AMBAG worked with the three county RTPAs, local governments, transit agencies and the public to develop and evaluate various strategies, using its upgraded transportation and land use modeling capabilities. The AMBAG Board of Directors selected a preferred scenario that formed the basis for the Draft 2045 MTP/SCS. Please see Chapter 4 and Appendix E for more information on the SCS.

Public Participation Plan and Interagency Coordination

Another requirement of SB 375 is that each MPO adopt a public participation plan for development of the SCS and Alternative Planning Strategy (APS), if one is required. Some of the key requirements of SB 375 related to public participation are:

- Outreach efforts to encourage the active participation of a broad range of stakeholder groups in the planning process, consistent with the agency's adopted Federal Public Participation Plan, including, but not limited to, affordable housing advocates, transportation advocates, neighborhood and community groups, environmental advocates, home builder representatives, broad based business organizations, landowners, commercial property interests and homeowner associations.
- Consultation with congestion management agencies, transportation agencies and transportation commissions as applicable.
- Workshops throughout the region to provide the public with the information and tools necessary to provide a clear understanding of the issues and policy choices. Each workshop, to the extent practicable, shall include urban simulation computer modeling to create visual representations of the SCS and the APS, if one is prepared.
- Preparation and circulation of a draft SCS and APS, if one is prepared, not less than 55 days before adoption of the final MTP.
- At least three public hearings on the draft SCS. To the maximum extent feasible, the hearings shall be in different parts of the region to maximize the opportunity for participation by members of the public throughout the region.
- A process for enabling members of the public to provide a single request to receive notices, information and updates.

For more information on public participation and outreach refer to Appendix D.

Coordination of Modeling Activities with Partner Agencies

AMBAG, as a federally designated MPO, is required to develop and maintain a tri-county Regional Travel Demand Model (RTDM) to meet federal and state requirements. The GHG target set by CARB applies to the tri-county Monterey Bay region. In this context AMBAG and the RTPA staff have established two levels of working committees that regularly met and worked together to develop the region's MTP and RTPs as well as to conduct modeling analysis. While the RTPAs do not maintain or run the RTDM, they were engaged in the consideration of the results of scenario model runs and in the process of refining the alternative scenarios. As the MTP was being developed, AMBAG worked with all of its partners (RTPAs, transit operators and local jurisdictions) as well as the appropriate federal and state agencies to ensure its MTP conforms to all applicable state and federal regulations.

2022 Regional Growth Forecast

In 2019, AMBAG began the process of developing a new forecast with a horizon year of 2045. The regional forecast is based on an analysis of forecasted state and national industry growth compared to the region's historical share of each industry.

The disaggregation of the forecast at jurisdiction level uses shift-share methods for population and employment. These methods essentially calculate future years population and employment based on previous trends. The forecast disaggregation also takes into consideration local land use policies and was developed using a collaborative approach whereby AMBAG incorporated the input of local planners, elected officials and the public. The final forecast is scheduled for adoption in June 2022 along with the 2045 MTP/SCS. The SCS scenarios were developed using this population and employment forecast as a control total in consultation and collaboration with region's local and regional agencies. The technical documentation for the Regional Growth Forecast is included in Appendix A.

Other Key 2045 MTP/SCS Tasks

Other key major tasks include updates to the plan performance measures, environmental justice analysis, new revenue projections, revised cost estimates for projects, programs and services and integration of system and demand management measures into the scenarios. In addition, the 2045 MTP/SCS incorporates recommendations from recently completed or underway studies such as the Central Coast Highway 1 Climate Resiliency Study, 2021 Title VI Plan, 2018 Coordinated Plan, Monterey County Regional Conservation Investment Strategy (RCIS), Santa Cruz County RCIS, Monterey County Active Transportation Plan, various Safe Routes to School Plans, Monterey Bay Area Rail Network Integration Study, Monterey Bay Area Feasibility Study of Bus on Shoulder Operations on State Route 1 and the Monterey Branch Line, Unified Corridor Investment Study, Transit Corridor Alternatives Analysis & Rail Network Integration Study: Watsonville to Santa Cruz, Highway 9/ San Lorenzo Valley Complete Streets Corridor Plan, and Highway 25 Public Transit Study. Other studies that are relevant to the development of the new AMBAG model include the Monterey Bay Origin and Destination Study, the Santa Cruz METRO On-Board Survey, the California Household Travel Survey (CHTS), and the 2017 National Household Travel Survey (NHTS).

Modeling Methodology

Development of the Regional Travel Demand Model

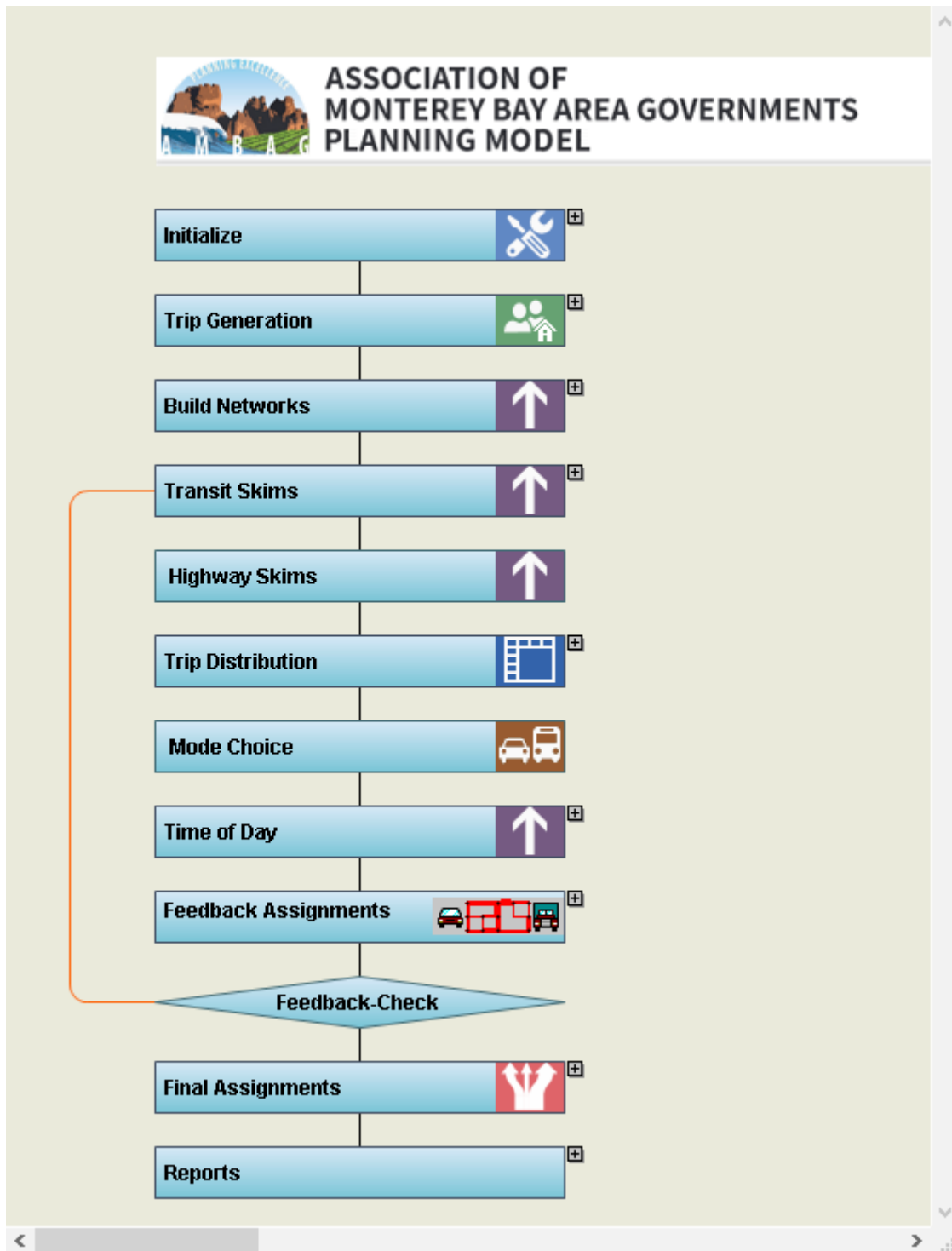
This section provides a comprehensive description of the 2020 AMBAG Regional Travel Demand Model (RTDM) update. The 2020 AMBAG RTDM is an updated travel demand model estimated and calibrated to 2015 conditions. The model was updated to run on TransCAD Version 9.0, which is the latest released version of TransCAD. This insures that the model uses the most advanced and model version of TransCAD available and can take advantage of all updated TransCAD software and performance features. The model interface was updated to TransCAD's modern flowchart interface. The flowchart interface improves model, file, parameter and scenario management. The flowchart interface for the AMBAG model in Figure F-1.

Travel Survey Datasets, and Model Estimation

The 2022 model update was estimated and calibrated using survey data from the 2010 CHTS and 2017 NHTS, Census, employment, and traffic data from that same year. The model utilizes innovative techniques to capture travel behavior at a more individual-based level and incorporates disaggregate level data into some of the modeling stages. The primary reasons for introducing more disaggregate level data into the model was to assist in addressing elements of SB 375, and to pave the way for a possible transition to a tour-based modeling approach in the future. This updated model is a traditional four-step trip-based approach, and as such includes models for Trip Generation, Trip Distribution, Mode Choice, and Trip Assignment. Specific differences compared with traditional approaches is described in more detail later in this document, include a population synthesis to drive the trip generation socioeconomic variables, calculation of the 4D variables (Density, Diversity, Design, and Destinations) using GIS techniques to support inputs to various model stages, the use of person-based trip rates, destination choice model for the trip distribution, and a mode choice component designed and estimated entirely from the survey. The model also employs a highly convergent traffic assignment algorithm.

The model is comprised of four primary time periods, an A.M. Peak Period defined as 6:00 A.M. to 9:00 A.M., a P.M. Peak Period from 4:00 P.M. to 7:00 P.M., a Mid-day Period from 9:00AM- 4:00 P.M. and an Evening Period from 7:00 P.M. to 6:00 A.M. The model is calibrated to Annual Average Daily Traffic (AADT) count data wherever available. The AADT calibration is based on summing the assigned flows for the four periods and comparing them against the AADTs from Caltrans and local jurisdictional count sources. The Percent Root Mean Square Error (%RMSE) is 29.82% system-wide, 15.91% on the freeways, and 23.68% on major arterials. As per the modeling guidance established by FHWA and various peer MPOs, the level of calibration of the current AMBAG RTDM is within the acceptable range and care has been taken to not over fit the base year model to observed conditions. Overall, the AMBAG RTDM maintains appropriate levels of sensitivity and forecasting ability.

Travel behavior in the AMBAG region is especially difficult to simulate for a variety of reasons. First, the region has a high variability in residential density and has a large rural component, particularly in the eastern and southern sections of the area. The region also has high income variability, which further complicates the process of linking the residential and employment zones so necessary to explaining travel behavior in the region. Heavy commuter travel and interregional travel to the San Francisco Bay area and a high number of people telecommuting complicate matters further. In addition, the region has a rich collection of tourist activities and special events occurring on weekends and during different seasons. There are also significant agriculture activities from farm workers making seasonal transient (field-to-field) trips and goods movements by freight modes such as trucks. The region experiences a wide variation in rural and urban characteristics with significantly longer trip lengths in rural areas resulting in higher VMT and peak spreading and a more rapidly aging population in and around coastal communities. The AMBAG RTDM has addressed these aspects well through the deployment of a disaggregated person-based trip generation model and a destination choice model for many of the home-based trip purposes.

Figure F-1: AMBAG Planning Model Flow Chart

Data, Surveys, and Studies Used in Model Development

Data from the recent American community Survey (ACS), Public Use Microdata Sample (PUMS) and Public Use Microdata Area (PUMA) from the US Census Bureau was used in the updated 2022 AMBAG RTDM. The AMBAG 2022 RGF, the 2011-12 CHTS, 2017 NHTS, Employment data procured from multiple sources (EDD, InfoUSA and Dun and Bradstreet), vehicle registration data from DMV, the 2012 External Origin Destination (OD) Study conducted by Fehr & Peers and Air Sage, the SCCRTC Onboard Transit Survey for the Santa Cruz METRO transit system, the City of Watsonville Transit Study, County and Caltrans traffic count data were used for the development, calibration, and validation of the model. In addition, reliable and validated output data from the neighboring MPOs (interregional commute components) and data from the agriculture vanpool program were utilized for the model development.

Following is a summary of the key modeling components and brief description of the methodology/approach applied in the 2022 AMBAG RTDM update.

Update to the Highway, Transit and Bicycle Networks for the 2015 Base Year, 2020, 2035 and 2045 Future Years

AMBAG Staff with the consultant assistant completed a comprehensive review and update to the highway, transit, and bicycle networks for the 2022 model update. AMBAG also employed a web based tool to engage local jurisdictions to review and ground truth key transportation network attributes such as speed, number of lane, and traffic counts. The latest data sets have exceptional geographic accuracy. The updated files include bicycle facilities and other geographic considerations pertinent to transit accessibility. For the 2015, 2020, 2035 and 2045 networks, the consultant worked with AMBAG, the RTPAs and Caltrans staff to determine which infrastructure improvements to include in each scenario.

Update to the Traffic Analysis Zone (TAZ) Data Layers

Utilizing current estimates and projections for future year socioeconomic characteristics pertinent to the model at various geographic scopes, AMBAG staff and the consultant generated attributes using GIS tools for the 2015 model base year and 2020, 2035 and 2045 future year TAZ data layers. The TAZ geography used in the updated model is an aggregation of 2010 Census Block boundaries. The geography is very similar to that submitted to the Census by AMBAG as part of the TAZ delineation process. The zone structure is comprised of 1,710 TAZs including 37 external zones that serve as the primary gateways to the study area. This consistency ensures a reliable calculation and transfer of important demographic data from the Census data files. Although the TAZ boundaries will remain the same for the horizon years (2035 and 2045) of the model, the socioeconomic characteristics may change significantly by jurisdictions within the region. AMBAG staff in consultation with the 21 local jurisdictions updated land use information for the base and future year TAZ data layers.

Population Synthesis

Anchoring the socioeconomic component of the model is a sophisticated nested population synthesis routine. This routine utilizes data at three levels to derive a synthetic population consistent with attributes found at the Census Block and Block Group levels. The routine utilizes the 5% PUMS from the Census and consistent with the PUMA boundaries. CHTS data points were also utilized to augment the PUMS data, requiring household weights to be re-calculated for the input PUMS data set. The population synthesis utilizes input data at the TAZ level and matches those household and population characteristics where ever possible. Household distributions by size of household, number of vehicles, and income group are matched. In addition, population by workers and non-workers are matched.

The following attributes are output at the person and household levels and matched against the TAZ marginal estimates and are later used as inputs into the trip generation model:

For Households:

- Household Size
- Vehicles in Household
- Income Category
- Tenure (own or rent)
- Number of Children under 18 in Household
- Number of persons above 65 years of age in household

For Persons:

- Age
- Employment Status
- Sex
- Enrolled in School
- Education Level Attained
- Race
- Worker Status

Trip Generation Model

In developing the trip generation model, AMBAG, with the consultant's assistance, evaluated increasing the number of explanatory variables. In addition to auto availability, age, and household size, other geographic variables such as lifestyle considerations, presence of young children in the household, and the availability of recreational opportunities were explored for inclusion in the model. A final list of variables included is shown below.

The AMBAG region is a large and diverse area. To better handle such diversity, the AMBAG model estimates a person based trip rate model instead of a household based model. This includes the creation of a synthetic population for the AMBAG region detailing a discrete record of persons and their characteristics to which the trip generation model is applied. Applying person based trip generation models has several advantages. It increases the sample size of data used to estimate the models and better explains the variations in travel behavior. It also provides a better platform on which to quantify the 4D factors (Density, Diversity, Design, and Destinations) and prepares the foundation for a possible transition to an activity based model (ABM).

The above listed population synthesis output attributes are at the person and household levels and matched against the appropriate census aggregation (block or block group) and are used as inputs into the trip generation model.

The trip generation model forecasts trip productions and trip attractions at the zonal level for seven primary trip purposes: Home based Work (HBW), Home based Shopping (HBShop), Home based School (HBSchool), Home based University (HBUniv), Home based Other (HBOther), Non home based-work (NHBW), and Non home based other (NHBO), and Visitors (to shopping and tourism sites). NHBW refers to trips that are non-home-based but have one trip end at a work location. NHBO trips are similar except that neither end of the trip is a work location. The visitor model is split into two market segments: Visitors to Shopping sites (Visitor_Shop) and Visitor to Tourism sites (Visitor_Tourist). The visitor purposes are the only models not fully supported by the travel survey. They are based on previous AMBAG modeling efforts with some modification.

Interregional Trip Estimates and the Assumptions

AMBAG recently conducted an Origin Destination (OD) study using two different methodologies as well as weeklong classified traffic counts. The OD survey results using license plate video survey were used to account for External-External (X-X), External-Internal (X-I), and Internal-External (I-X) and was validated with traffic counts. To develop interregional highway volume at external gateways for the 2022 AMBAG RTDM, staff consulted with neighboring MPO modeling staff (Metropolitan Transportation Commission [MTC], San Luis Obispo Council of Governments and Merced County Association of Governments) to ensure maximum consistency between MPO's assumed gateway volumes. After a careful review of methodology used in the MTC's Plan Bay Area 2050 (PBA 2050), AMBAG adopted MTC's interregional gateways volume assumptions for 2045 MTP/SCS. MTC and AMBAG staff conducted a historical trend analysis for all the common regional gateways, looking at volumes of both commute and non-commute travel. In the PBA 2050 and AMBAG's 2045 MTP/SCS trend line analysis was used to continue scaling up volumes at regional gateways for non-commute travel to reflect increased freight, recreational, and other non-commute trip growth in the Northern California megaregion, while commute trips were assumed to remain fixed at year 2015 levels. Most recent travel demand model update for AMBAG and SLOCOG was conducted under the joint ABM project and same regional gateways volumes were rolled in to 2022 AMBAG RTDM. A table of key regional gateways with baseline and future year volumes used in 2022 AMBAG RTDM is listed in Figure F-2 below.

Figure F-2: Regional Gateways with Volumes

Regional Gateways with Volumes				
ID	External Gateways	2020	2035	2045
9005	US 101 (AMBAG North)	98,000	102,220	107,668
9003	Santa Cruz Highway (CA 17)	57,000	53,252	52,012
9007	CA 156 @ 152 E	42,300	39,666	41,710
9006	CA 152-101	29,000	30,248	31,860
9009	US 101 (AMBAG South)	22,600	22,600	35,822
9004	CA 152	6,700	6,326	6,440
9001	CA Route 1 (AMBAG North)	5,000	3,460	3,064
9002	Congress Springs Road SR 9	3,700	2,278	1,990
9010	CA Route 1 (AMBAG South)	2,700	2,700	4,224
9056	Skyline Blvd. SR 35	1,050	1,050	1,050
9008	CA 198	700	700	700

Trip Distribution (Destination Choice Model)

The AMBAG RTDM deployed two primary trip distribution models, a destination choice model and a gravity model for this model component. Traditionally, distribution models have primarily utilized a formulation of a gravity model. Unfortunately, the gravity model's aggregate nature limits its ability to capture the range of individual destination choice behaviors manifested by the population. A destination choice modeling approach has the potential to introduce more behavioral realism and hence generate trip tables that are closer to reality and more sensitive to smart growth land use policies.

A destination choice model also can include variables not typically present in a traditional gravity model. For instance, the home-based-work trip purpose gravity model can be replaced with a work location choice model for workers that predict their work zone. Another clear advantage of the destination choice model is that accessibility measures can be directly input as variables to the choice models. Finally, destination choice models will eliminate the need for ad-hoc adjustments such as the use of K-factors in the gravity model.

Gravity Model

The mode choice model was evaluated to explore avenues for enhancing its structure, utility specifications, and coefficients. Model parameters were compared against Federal Transit Administration (FTA) guidelines to document any instances of values that fall outside of the ranges suggested by the guidelines. Nevertheless, it should be noted that the most appropriate model parameters for the AMBAG region were obtained by re-estimating the model from the latest CHTS and Census data. The non-uniform travel characteristics, demographics, and population densities of the region meant that additional improvements for optimizing the mode choice component of the travel demand model had to be incorporated. Shortest paths were computed from zone to zone based on travel time and estimated congested travel times were skimmed from the least cost paths utilized in the traffic assignment stage. Intra-zonal travel times were computed based on the average time to the nearest 3 zones.

The balanced productions and attractions were obtained from the trip generation stage.

Friction Factor Computation

To compute the friction factors, the origin and the destination zone for each trip in the survey data was obtained using the analysis tools in TransCAD. The trip length for each trip was determined based on the shortest path matrix. Using the survey weights, the trip length frequencies were determined on a minute by minute basis for each of the trip purposes. The trip frequencies were plotted versus trip travel time intervals, and gamma function curves were fitted to match the observations. It was generally observed that the best fit was obtained by using two sets of gamma curves for each trip purpose. One curve was used to model the initial and the peak region of the observations (generally around 1 – 15 minutes) and the other curve was employed to model the tail region of the observations (> 15 minutes). The trip interval used to aggregate trip frequencies was 1 minute for all trip purposes. Friction factors were estimated for both Urban and Rural zone sets due to significant differences in observed trip lengths and travel behavior in the CHTS.

Mode Choice Model

The updated mode choice model for the AMBAG RTDM utilizes a nested logit-based model structure. The model is fully estimated using the combined 2010 CHTS and 2017 NHTS survey records and as such only includes variables found to be significant. For the model update, one of the objectives was to estimate mode choice models that include 4Ds explanatory variables, the idea being that the model should be responsive to these parameters.

The mode choice model was evaluated to explore avenues for enhancing its structure, utility specifications, and coefficients. Model parameters were compared against Federal Transit Administration (FTA) guidelines to document any instances of values that fall outside of the ranges suggested by the guidelines.

Independent Variables, A-priori Hypotheses, and Estimation Setup

The combined household survey was analyzed to identify variables that might be useful in explaining mode choice behavior in the AMBAG area. In addition, various zonal and OD-based skim variables were tagged to the survey to include the effects of geographic context, accessibility and network congestion.

At the zonal level, a Central Business District (CBD) dummy was generated to capture the unobserved and perceived benefits of destinations in the more urbanized areas of Santa Cruz, the Monterey Peninsula, and Salinas. Average transit stop densities were also computed at both the origin and destination ends of trips. Parking cost at the destination trip end was considered for the auto modes, with half the cost used for carpool trips. However, these effects were found to be either insignificant or resulted in counter-intuitive coefficient signs.

Congested highway and transit skims (including in-vehicle and egress walk times) were tagged to the survey, making sure that AM and PM peak period trips used the skims from the appropriate time of day. Highway skims were used for the school bus mode.

Even with the additional records that were available in the combined survey, the dataset contained limited trip records that used transit as the mode of travel. This data limitation meant that the transit mode could not be reliably estimated. A practical work-around to include transit in the mode choice models is discussed later.

Weighted nested and multinomial logit model estimations were conducted using the Nested Logit Estimation procedure. Adjusted rho squared ($(\rho)^2$) values, denoted henceforth as $\rho_bar_squared$, are reported as a measure of model fit to the survey data. Standard t-statistics are presented as an indicator of the relevance of the different variables in the mode choice context.

Mode Choice Model Estimation Results

This section summarizes the final estimated model specifications and utility coefficients identified for various trip purposes. One objective was to estimate separate mode choice models for the peak and off-peak periods. However, no significant difference was observed for any of the purposes. A combined model was therefore estimated for each of the purposes.

The estimated models are a series of logit models (multinomial or nested) that vary by trip purpose and by peak/off-peak periods. For most purposes, the following travel modes are estimated:

- Auto drive alone
- Auto shared ride (carpool)
- Walk
- Bike

School Bus and Other modes were added as needed to capture purpose-specific situations.

As stated earlier, the limited sample sizes in the travel survey (particularly with transit as the chosen mode) prevented a deeper nesting structure, the estimation of more sub-modes, and the inclusion of variables such as transit fare and transit in-vehicle travel time. Asserted models give you the ability to define more detailed and complex models, however their parameters and coefficients may not be consistent with survey observations.

A full complement of mode-specific constants was estimated in each case, typically using the bike mode as the base. Where the t-statistics of the constants were found to be low, they were still retained (at a lower confidence level) to maintain model estimation integrity in the face of missing variables.

In some cases, the Auto nest (comprised of Drive Alone and Shared Ride modes) was retained in the model while the corresponding logsum coefficient was fixed at 1. This was done because the estimation procedure did not identify a coefficient significantly different from 1.

Systematic utilities for the various modes are denoted by V_DA(Drive Alone), V_SR(Shared Ride), V_Bike, V_Walk, V_SB(School Bus) and V_Transit.

The mode choice constants were subsequently re-calibrated to better match the weighted shares observed in the household survey. Separate sets of constants were estimated to differentiate between peak and off-peak effects.

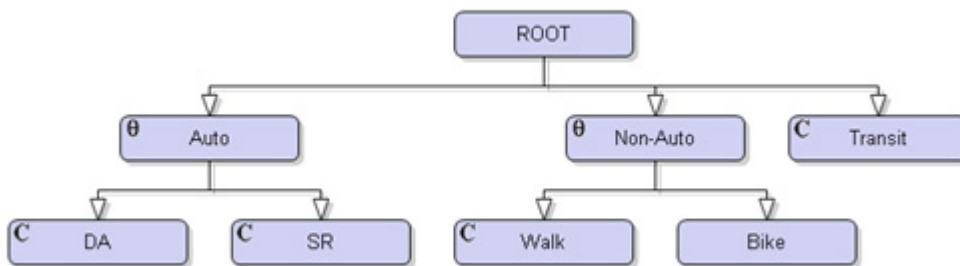
Figure F-3: Mode Choice Model Coefficients

Mode Choice Model Coefficients	
Coefficient	Description
C_DA	Mode-specific constant for Drive Alone
C_SR	Mode-specific constant for Carpool
C_Walk	Mode-specific constant for Walk
C_Bike	Mode-specific constant for Bike
C_SB	Mode-specific constant for School Bus
C_Transit	Mode-specific constant for Transit
B_Time	Generic travel time coefficient
B_Time_DA	Travel time coefficient for Drive Alone
B_Time_CP	Travel time coefficient for Carpool
B_Time_Other	Travel time coefficient for Transit and Non-Motorized modes
B_TransitAccess	Coefficient for transit accessibility to jobs
B_Egress	Coefficient for transit egress time
B_CBD	Coefficient for CBD dummy
B_Park	Coefficient for auto parking cost at the destination zone
B_AOC	Coefficient for cost-per-mile auto operating cost
B_Monterey	Coefficient used to better capture un-observed transit travel behavior unique to trips interacting within the MST service area (NHBO trips only).
B_TotEmpDensity	Coefficient for total employment density at trip origin
B_IntDensity	Coefficient for intersection density at trip origin
B_StopDensity	Coefficient for transit stop density at trip origin
B_Diversity1	Coefficient for retail, service employment and HH diversity at trip origin
B_Diversity2	Coefficient for retail employment and HH diversity at trip origin
B_JobMixDiversity	Coefficient for job mix diversity at trip origin
B_RSE_Density	Coefficient for retail and service employment density at trip origin
Theta (Auto)	Logsum coefficient for Auto nest
Theta (Non-Auto)	Logsum coefficient for Non-Auto nest

Many 4Ds variables were considered in the mode choice models. Of the 4Ds variables tested, only the total employment density variable was ultimately included as the one having sufficient explanatory power and being statistically significant. The limited sample size of trip records in the survey may have played a role in the lack of 4Ds variables successfully included, while the CBD dummy showed greater explanatory power than other 4D variables tested.

Note that the bus mode is used as the base alternative with a mode specific constant of zero. The nesting structure of each model, along with a list of each model variable and coefficient and rho-squared result, is presented below:

Figure F-4: Model Structure



While the equations above indicate separate skims for HOV and general-purpose travel lanes, no such distinction exists in the AMBAG highway network. The highway skims and highway HOV skims were assumed to be the same for model estimation. The utility specification still allows the flexibility to use HOV-specific skims in the future.

Figure F-5: Mode Estimates

Mode Estimates	
Coefficient	Estimate
C_DA	5.33
C_SR	4.35
C_Walk	4.77
C_Transit	-0.35
B_Time	-0.0078
B_TotEmpDensity	0.056
B_WalkDist	-1.181
B_BikeDist	-0.871
B_StopDensity	0.0059
B_TransitAccess	0.069
B_JobMixDiversity	0.114
B_AOC	0.0054
B_ParkCost	-0.026
Theta (Auto)	0.63
Theta (Non-Auto)	0.15
Rho_bar_squared	0.43

It should be noted that the transit mode was never chosen for any of the HBW trips in the survey. A transit mode was subsequently added to the estimated model to allow AMBAG to test for transit effects in scenario analysis. The generic travel time coefficient from the other modes was transferred to the transit mode, and local knowledge was used to estimate it's constant to produce a 1.5% transit mode share. The following tables shows observed and modeled mode shares by trip purpose, after adjusting the mode specific constants to better replicate the shares indicated in the household survey and to account for modes that were underreported in the survey.

Figure F-6: Observed Peak Mode Shares by Trip Purpose

Observed Peak Mode Shares by Trip Purpose								
Trip	Drive- Alone	Shared Ride	Walk	Bicycle	Transit	School Bus	Other	Total
HBW	77.5	16.5	2.4	1.5	1.9	0	0	100
HBShop	35.6	52.5	8.1	2.7	1.1	0	0	100
HBSchool	2.1	50.2	33.1	4	10.6	9.3	0	100
HBUniv	55.3	11.7	1.3	12.8	18.9	0	0	100
HBOther	25.9	54	15.3	3.1	1.2	0	0.5	100
NHBW	70.3	19.5	7.7	0.5	0.7	0	1.3	100
NHBO	26.2	58.9	9.7	0.2	0.7	0	0.3	100

The corresponding shares from the AMBAG model are presented below, showing an accurate replication of the survey data:

Figure F-7: Modeled Peak Mode Shares by Trip Purpose

Modeled Peak Mode Shares by Trip Purpose								
Trip	Drive- Alone	Shared Ride	Walk	Bicycle	Transit	School Bus	Other	Total
HBW	77.5	16.5	2.5	1.6	1.9	0	0	100
HBShop	35.5	52.4	8.2	2.7	1.2	0	0	100
HBSchool	2.1	49.8	33.6	3.9	0	10.5	0	100
HBUniv	55.8	11.9	1.3	12.7	18.2	0	0	100
HBOther	25.8	53.9	15.4	3.1	1.3	0	0.5	100
NHBW	70.3	19.4	7.8	0.5	0.7	0	1.3	100
NHBO	27.2	61.2	10.3	0.2	0.7	0	0.3	100

Off-Peak Models

Figure F-8 shows the target mode shares for off-peak-period trips:

Figure F-8: Observed Off-peak Mode Shares by Trip Purpose

Observed Off-peak Mode Shares by Trip Purpose								
Trip	Drive-Alone	Shared Ride	Walk	Bicycle	Transit	School Bus	Other	Total
HBW	76.6	14.6	5.1	2.3	1.4	0	0	100
HBShop	32.4	56.6	8.3	1.6	1.1	0	0	100
HBSchool	2.8	49.4	37.7	4.4	0	5.7	0	100
HBUniv	68.1	9.5	2.8	11.4	7.9	0	0	100
HBOther	29.5	53.1	13.3	2.6	1	0	0.5	100
NHBW	68.6	14.1	10.4	1.6	3.4	0	1.9	100
NHBO	29.4	58	10.3	1	0.6	0	0.7	100

The corresponding shares from the AMBAG model are presented below, showing an accurate replication of the survey data:

Figure F-9: Modeled Off-peak Mode Shares by Trip Purpose

Modeled Off-peak Mode Shares by Trip Purpose								
Trip	Drive-Alone	Shared Ride	Walk	Bicycle	Transit	School Bus	Other	Total
HBW	76.5	14.6	5.2	2.3	1.4	0	0	100
HBShop	32.3	56.5	8.4	1.6	1.2	0	0	100
HBSchool	2.8	49	38.3	4.3	0	5.6	0	100
HBUniv	68.1	9.7	2.9	11.4	7.9	0	0	100
HBOther	29.4	53	13.4	2.6	1.1	0	0.5	100
NHBW	68.5	14	10.5	1.6	3.6	0	1.8	100
NHBO	29.3	57.8	10.5	1	0.6	0	0.7	100

*The mode choice model was adjusted to yield observed ridership shares not represented in the survey. For HBUniv trips, the output shares were adjusted using guidance from a 2012 Santa Cruz METRO on-board travel survey. For HBW trips, the regional target transit share was assumed to be in the vicinity of 1%.

Truck Model

A simplified truck model was inserted into the model stream to estimate Internal-to-Internal truck trips. IX-XI truck trips and XX truck trips are already factored into the model since the IX –XI and XX trips are based on external station traffic counts that include truck trips. The truck model is based on The Southern California Association of Government’s (SCAG) 2003 truck model, which estimates truck trip rates based upon employment variables. The employment categories were re-categorized into the AMBAG employment

categories, and the trip rates were then re-estimated based upon the AMBAG employment categories. Truck trip generation, distribution, and time-of-day models were added to the model stream. The truck distribution model utilized a Gravity Model with separate friction factor curve definitions for light, medium, and heavy trucks. The friction factors are calculated using a generalized cost formulation that considers operating cost per hour (dollars), fuel efficiency (miles per gallon), operating cost per distance (dollars), and fuel price (dollars per gallon).

Time of Day Analysis

A major upgrade to the model is the deployment of time period and trip purpose specific parameters. This includes the utilization of separate peak and off peak period skims, and model parameters. This approach provides a superior explanation of peak and off peak travel patterns throughout the region

AMBAG worked closely with Caltrans, and other relevant regional and local agencies to determine the most appropriate day and time periods for modeling. The model uses the following time periods:

- A.M. peak hour and period (6:00-9:00 A.M.)
- P.M. peak hour and period (4:00-7:00 P.M.)
- Mid-day (9:00 A.M.-4:00 P.M.)
- Night (7:00 P.M.-6:00 A.M.)

Using the available count data, the AMBAG RTDM was calibrated for each of the time periods shown above.

Highway and Transit Assignment

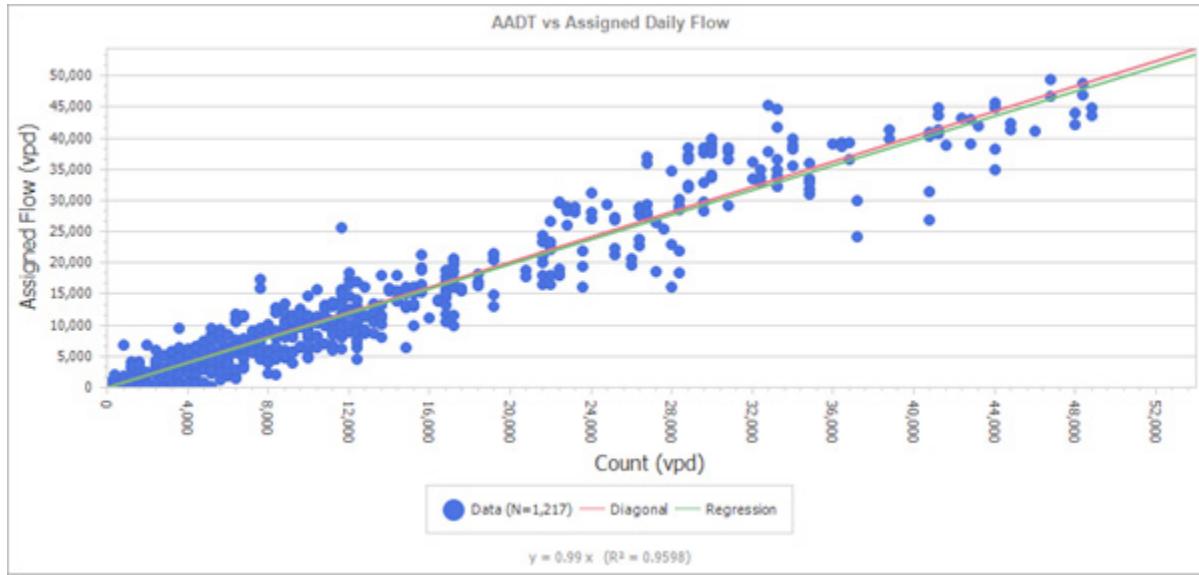
For highway assignment the AMBAG RTDM utilized a state of the practice and highly convergent traffic assignment methodology known as Origin-Based User Equilibrium. This method improves significantly on previous highway assignment methods by providing a more stable solution to the highway assignment problem. This provided AMBAG RTDM with the ability to more accurately quantify project benefits and explain the highway assignment results in a clearer context.

In the highway assignment step, trips from the origin destination matrix are assigned to the highway network to determine flows on links and route choices between any origin and destination. In the AMBAG model, four assignments are performed: A.M. peak period trips (6:00-9:00 A.M.), P.M. Peak period trips (4:00-7:00 P.M.), Mid-day (9:00 A.M.-4:00 P.M.), and Evening/Night (7:00 P.M.- 6:00 A.M.).

Model Performance

The following model performance criteria were used to calibrate the model:

- Graphically display a scattergram of model daily volumes versus average annual daily traffic (AADT). The volumes should be in line with the AADT, with few outliers.
- Calculate the correlation and R2 between model volumes and counts. R2 values should be greater than 0.88. The correlation between daily counts and model flows was 0.95.
- Compare model flows versus counts by functional class and volume group type. Model volumes should be within certain standard percentage ranges of counts within the groupings.
- Compute Root Mean Square Error (RMSE) between volumes and counts. Volumes should be within certain stand RMSE values within the groupings.

Figure F-10: Model Daily Volumes versus AADT

Daily Model Volumes vs. Counts, %RMSE by Functional Class

Transit assignment was performed using TransCAD's Pathfinder methodology. This methodology is a generalization and significant improvement of the highly-regarded Optimal Strategies approach and far superior to typical Urban Transportation Planning System (UTPS) methodologies. The transit assignment includes walk and bike access, along with park and ride functionality for both access (A.M.) and egress (P.M.). The Pathfinder methodology has been deployed successfully across the United States, and has gained wide acceptance from the FTA. For the transit assignments peak and off-peak transit trips are assigned separately and then aggregated for time of the day assignments into a total transit flow table.

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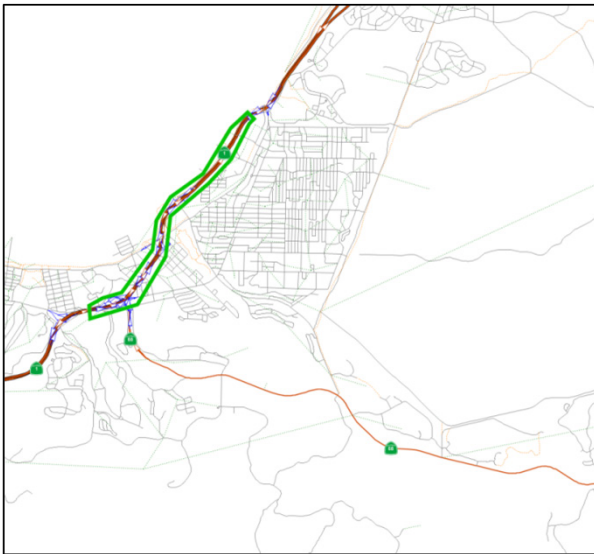
Figure F-11: Daily Model Volumes versus Counts, % RMSE by Functional Class

Daily Model Volumes vs. Counts, % RMSE by Functional Class					
Link Type	Segments	Total Count	Total Flow	% Difference	% RMSE
Freeways	97	3,152,660	3,235,057	2.61	15.91
Major Arterials	416	5,621,781	5,548,051	-1.31	23.68
Minor Arterials	320	1,491,063	1,270,568	-14.79	46.64
Major Collectors	172	556,229	334,137	-39.93	65.44
Minor Collectors	58	87,937	68,994	-21.54	63.12
Local Roads	110	155,238	84,742	-45.41	87.31
Ramps	22	105,199	103,542	-1.58	44.87
All Counts	1,217	11,386,939	10,860,735	-4.62	29.82

Feedback

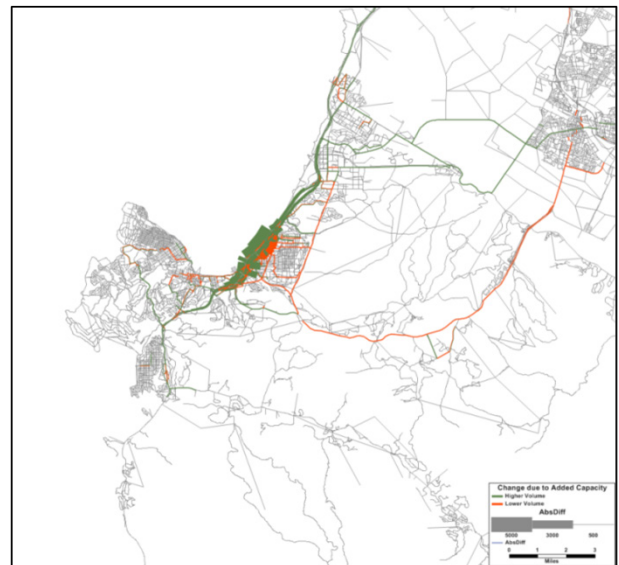
After the end of the highway assignment step, the congested travel times are used to update the input travel times into the both the highway and transit networks. Both the highway and transit skimming routines then use these congested times to produce congested highway and transit skim matrices. The logic of feedback is that the congested times are a more accurate measure of travel time than the initial free flow times, and can have a profound effect on the trip distribution and mode choice stages steps. During the feedback process, all models following the skimming stage are run again until an updated set of congested times is found following the highway assignment. This loop continues until a set number of feedback iterations are completed. The Multiple Successive Averages (MSA) method is used to calculate the congested time resulting from each feedback iteration. A total of 5 feedback loops are performed in the AMBAG RTDM. Five loops were found to be sufficient to ensure stability in the final solution. Due to the peak period definitions and the high variance in flow at the start of the peak and the remaining hours, skims for the peak period utilized AM skims derived from the hours 7:00-9:00 A.M. The assignment results are reported for all three hours of this period, however. Mid-day skims are used for the off-peak periods, utilizing a four-hour capacity.

**Figure F-12 : Highway 1 Widening
4 to 6 lanes**



CA 1 was widened within the area highlighted in green. The associated capacity per lane, speed, etc. were automatically updated based on the lookup table by facility type and number of lanes.

**Figure F-13: Area of Influence for
Widening Project**



The magnitude, direction and area of influence for the widening is appropriately sensitive for traffic assignment. Distribution and mode choice were not investigated since the widening was limited and few alternatives are available in the corridor.

Sensitivity Testing Results

AMBAG with the help of consultant (Caliper and Fehr and Peers) jointly conducted a model sensitivity test for modified land use changes (density and diversity), added highway capacity, transit fare, and additional bus rapid transit (BRT)/light rail transit (LRT) transit services using the update 2045 No Build RTDM.

The conclusions of these tests demonstrate the model's sensitivity to land use and transportation changes. For changes where the model is not sensitive, potential enhancements or post-processing methods is recommended. For additional technical details please refer to the 2022 AMBAG RTDM Technical Documentation Report.

Added Roadway Capacity

The model is appropriately sensitive during traffic assignment for roadway widening projects in terms of route selection. The influence of roadway capacity on trip generation, distribution, mode choice, and GHG emission were not evaluated.

Modified Land Use

The changes in land use and the formulation of the mode choice model were not significant enough to cause a change in mode. As a result, the implication of the land use change on VMT is determined by the location and magnitude of the land use rather than the density, diversity and other D factors. Post-processing for active transportation, Transportation Demand Management (TDM), and density were recommended to apply where necessary for 2045 MTP/SCS.

Added Transit Service and Fare Change

The model is not sensitive to changes in transit services and fare change (free transit or double the existing fare). The mode choice model estimation based on survey data resulted in a fairly static mode split model. As such, the change to transit shifted trips from local bus to BRT or LRT, but overall mode shares remained constant. Although these tests were conducted in isolation to determine model sensitivity, it is recommended that scenarios be developed to maximize the sensitivity by incorporating multiple strategies cohesively. For example, additional infill or density should be accompanied with enhances transit service along the route, and stops should be placed within walking distance.

Off-Model Adjustments

Off-model adjustments are commonly used to evaluate and estimate VMT/GHG emissions reductions from various strategies to which regional travel demand models (RTDM) and land use models are not sensitive. These off-model adjustments are based on evidence from empirical research that demonstrate the potential for VMT/GHG emissions reductions from particular strategies found in 2045 MTP/SCS.

Figure F-14 provides a summary of projects by category as they are included in the 2045 AMBAG MTP/SCS preferred scenario. All together the 2045 MTP/SCS includes 855 projects and total committed funding for SCS implementation is \$13.5 billion (in today's Dollars). As shown in the table below, over \$11.3 billion (84%) of the AMBAG 2045 MTP/SCS preferred scenario investment is dedicated to transit, roadway operation and maintenance, and other alternative mode of transportation improvements (TDM, TSM and Active Transportation) with supportive infill and higher density mixed land use development. It is expected that the 2045 MTP/SCS with the substantial investment in these non-modelable projects and programs will accelerate the implementation of the adopted SCS and promote sustainable modes of travel, clean vehicle technologies and traffic operational improvements (ITS/TSM) with in the Monterey Bay Area which will help improve air quality.

Figure F-14: Summary of Projects by Category in the 2045 MTP/SCS Preferred Scenario

Expenditures by Project Categories *	Total in Today's Dollars
Active Transportation / Transportation System & Demand Management- Total	\$1,235,005
Active Transportation (AT)	\$998,515
Transportation Demand Management (TDM)	\$127,238
Transportation System Management (TSM)	\$109,252
Roadways & Other Projects - Total	\$8,280,759
Highway - New Capacity	\$1,595,185
Highway - Operations & Maintenance	\$1,959,444
Local Streets and Roads	\$602,115
Local Streets and Roads - Operations & Maintenance	\$3,478,389
Other	\$645,626
Transit - Total	\$4,023,970
Paratransit Operations and Capital	\$514,069
Transit - New Capacity	\$614,124
Transit - Operations	\$2,406,729
Transit - Fleet Rehab and Capital	\$489,048
Grand Total	\$13,539,734

* Total Expenditures by Project Type (all figures in 1,000's)

Source: AMBAG, SBtCOG, SCCRTC and TAMC

2045 MTP/SCS Off Model Strategies

Where the impacts of certain policy scenarios cannot be measured in the 2022 RTDM, AMBAG relied on “off-model” techniques based on academic literature reviews, collaboration with other MPOs and consultation with CARB’s Policies and Practices Guidelines.

Off-model adjustments were made for three programs or bundles of projects that are included in the 2045 MTP/ SCS:

1. Work From Home (WFH)
2. Travel Demand Management (TDM): such as Agriculture workers vanpool program, employer-based trip reduction, ridesharing, and car sharing programs
3. Compute Root Mean Square Error (RMSE) between volumes and counts. Volumes should be within certain stand RMSE values within the groupings.
3. Regional Electric Vehicle Chargers and Electric Vehicle (EV) Incentive programs
4. Transportation System Management (TSM) such as intersection improvements, round about development, ramp metering, variable message signs, incident management, and deploying Intelligent Transportation Systems (ITS)
5. Active Transportation (AT) projects, education and promotional programs, and;

6. Transit enhancements and mix land use development around High Quality Transit.

All these six strategies were also included in the region's previous 2035 and 2040 MTP/SCS. Continuing implementation of these VMT and GHG reduction strategies with modification as well as allocating more funding will help not only achieving region's GHG target but it will further improve environmental quality of the region and provide enhance mobility options to citizens and businesses.

In the 2045 MTP/SCS, the primary GHG emission calculation methodology and approaches remain unchanged but the data used for inputs and assumptions have been updated to reflect current condition with new data and research where available. The GHG emission quantification approaches and results are summarized in the following section by strategy.

Working From Home

The new “working-from-home economy,” which is likely to continue long past the coronavirus pandemic that spawned it, poses new challenges – from a ticking time bomb for inequality to an erosion of city centers – according to Stanford economist Nicholas Bloom.

The survey results from several nationwide surveys conducted during the COVID-related economic shutdown provide a snapshot of the emerging new reality.

- Forty-two percent of the U.S. labor force is now working from home full time, accounting for more than two-thirds of economic activity, while another 33 percent are not working — a testament to the savage impact of the lockdown recession. The remaining 26 percent are working on their business's premises, primarily as essential service workers.
- As companies consider relocating from densely populated urban centers in the wake of the COVID-19 crisis, cities may suffer while suburbs and rural areas benefit.
- Several corporations are developing plans for more work-from-home options beyond the pandemic. Working from home is here to stay, but post-pandemic will be optimal at about two or three days a week.
- The Atlanta Federal Reserve and the University of Chicago indicated that the share of working days spent at home is expected to increase fourfold from pre-COVID levels, from 5 percent to 20 percent. Typical plan is that employees will work from home one to three days a week and come into the office the rest of the time.

Figure F-15 provides estimated VMT/GHG reductions as a result of 15% of the Monterey Bay region workers of the WFH employment categories are estimated to work from home for the year 2020 and 2035.

Figure F-15: Work at Home Off-Model Adjustments

Work at Home Off-Model Adjustments		
Category	2020	2035
Total Workers	180,870	191,829
% work at home Modeled	5.00%	5.00%
Work at home workers	9,044	9,591
Off-Model Adjustments		
% work at home	20.00%	15.00%
Work at home workers	36,174	28,774
Additional work at home workers	27,131	19,183
Miles reduce per weekday	15	15
VMT reduce per weekday	406,958	287,744
GHG reduce per weekday	374,490	259,174
% GHG Reduction	2.71%	1.81%

Source: AMBAG Regional Growth Forecasts (public/government sector, self-employed, service and education)* and AMBAG RTDM

Travel Demand Management (TDM)

Regional Transportation Planning Agencies (RTPAs), CalVans and other agencies within the Monterey Bay area have coordinated agriculture and general vanpools, car share and bike share programs to encourage people to use alternative commute option with help reduce roadway congestion and GHG emission from transportation sector. The CalVans(<https://calvans.org/>), a California Vanpool Authority sponsored agency, operates an agriculture vanpool program in the Monterey Bay area as well as other parts of the California. General vanpool program recruitment has consisted of online passenger and driver matching, employer outreach, startup subsidy to encourage continued participation when a passenger is lost, discounted/free parking permits, and various other incentives. In 2015, there were 82 agriculture vanpool fleet in operation within the Monterey Bay Area. Each van carries an average of 12 workers with average of 40 miles of round trip per day. The vanpool program was included in previous MTP/SCS plans and all the operators within the Monterey Bay area are projected to continue supporting vanpool program in 2045 and beyond.

AMBAG assumes this incentive will significantly increase the vanpool fleet. Combined with growth in Monterey Bay Area population, employment, and community's commitment for VMT/GHG reduction, the size of the AMBAG area vanpool fleet is expected to reach 318 vans by 2035 and 379 vans by 2045, after which the number of vanpools is assumed to stabilize. Region's RTPAs works with vanpool groups, CalVans, University campus, commute with Enterprise and other vanpool operators, to provide technical assistance such as ride matching tools, identification of incentives (e.g., parking and bridge toll discounts), and social media promotional resources to help form and fill vanpools. Figure F-16 summarizes the VMT/GHG reductions realize from CalVans agriculture vanpool program only.

Figure F-16: Agriculture Vanpool Program Related to VMT/GHG Reduction

Agriculture Vanpool Program related VMT/GHG reduction		
	2020	2035
Agriculture Vans	228	318
Round Trip Miles	40	40
Average Passenger/Van	12	12
Total VMT driven	9,120	12,720
VMT Reduction (12-1=11 persons)	100,320	139,920
GHG Reduction (Lbs)	92,316	126,028
Per Capita GHG reduction	0.67	0.88

Average occupancy = 12 people, Average round trip in Mile = 40 Miles

Source: CalVan (Agriculture Vanpool provider)

Regional Electric Vehicle Chargers and Electric Vehicle (EV) Incentives

Electric vehicles (EVs) have the potential to significantly reduce GHG emissions from motor vehicles. In the Monterey Bay Area, Central Coast Community Energy (CCCE) and the Monterey Bay Air Resources Board (MBARD) public agencies are providing below listed programs to promote EV including both plug-in hybrid electric vehicles (PHEVs), battery electric vehicles (BEVs), and associated EV service equipment (EVSE).

1. Electric Vehicle Incentive Program – BEV purchase/lease rebate (MBARD)
2. Electrify Your Ride – incentive for BEV or PHEV and EVSE (CCCE)
3. Electric School Bus Program (CCCE)

The costs of installing charging stations can be high, and there are other barriers (e.g., onsite electrical capacity) that may also limit the potential for deploying charging at workplaces. These programs are designed to help overcome EV adoption barriers by providing financial assistance to residents, interested employers, retailers, parking management companies, etc. A regional network of charging infrastructure will provide drivers an opportunity to plug in while at work, which is where most vehicles spend their time parked when not at home. This will mean that PHEVs are able to travel more miles using electricity and fewer miles using gasoline, reducing GHG emissions. CCCE believes programs like Electrify Your Ride makes clean vehicles more affordable and accessible across all income groups in Monterey Bay Area region.

Electrify Your Ride – EV and EV Charger Rebate Program by CCCE

The Electrify Your Ride Program offers incentives for new/used BEV or PHEV, and for the purchase and install of Level-2 EV charging equipment. Eligible applicants include homeowners, property owners, commercial businesses, and public agencies. CCCE understands that making the switch to electrifying our transportation and buildings may include updating or replacing electrical panels on older buildings.

As per the Figure F-17, CCCE invested \$2.4 million into the tri-county over the past two years and will continue investing.

Figure F-17: Cumulative Financial Incentive Provided by CCCE

Cumulative Financial incentive provided by CCCE						
Program Type	CCCE Program	Customer Type	Monterey	San Benito	Santa Cruz	Total
Electric Vehicle	Electric School Bus Program	Public Agency	\$646,936	-	\$191,165	\$838,101
Electric Vehicle	Electrify Your Ride Program	Commercial	\$5,000	\$2,000	-	\$7,000
Electric Vehicle	Electrify Your Ride Program	Public Agency	\$4,000	-	\$2,000	\$6,000
Electric Vehicle	Electrify Your Ride Program	Residential	\$225,800	\$23,000	\$213,700	\$462,500
Electric Work	Electrify Your Ride Program	Commercial	-	-	\$1,986	\$1,986
Electric Work	Electrify Your Ride Program	Residential	\$27,121	\$5,910	\$42,847	\$75,878
EV Charger	Electrify Your Ride Program	Commercial	-	-	\$1,986	\$1,986
EV Charger	Electrify Your Ride Program	Residential	\$13,200	\$4,856	\$19,409	\$37,465
EV Charger	Central Coast Incentive Project	Commercial	\$180,308	\$106,947	\$712,745	\$1,000,000
Grand Total	-	-	\$1,102,365	\$142,713	\$1,185,838	\$2,430,917

Source: CCCE Energy Programs-Annual Reporting FY 20/21

AB 2766 Motor Vehicle Emission Reduction Grants

California Assembly Bill 2766 (AB 2766), signed into law in 1990, permits Monterey Bay Air Resources District (MBARD) to allocate a \$4.00 per vehicle registration surcharge fee towards grant projects that reduce motor vehicle emissions such as roundabouts, adaptive traffic signal control systems, medium to heavy-duty vehicle electrification and light-duty zero emission vehicle incentives. Funds may also be used for related planning, monitoring, enforcement, and technical studies pursuant to the California Clean Air Act. Funds are available to public and private agencies as well as residents in Monterey, San Benito and Santa Cruz Counties.

Monterey Bay Electric Vehicle Incentive Program by MBARD

The MBARD EV Incentive program has run consecutively for the past 5 years. This fiscal year's program, which opened on July 1, 2021 will represent 6 years of operation. The program annual average budget has been \$400,000. Over the past 5 years, 100% of allocated funds have been granted as incentives to purchase EVs. The total number of electric vehicles incentivized is 1,360.

The other component of the MBARD Clean Vehicle Program is the Public Agency EV Voucher Replacement Program. Over the same 5-year period, MBARD awarded \$280,000 to public agencies toward the replacement of 28 gasoline-powered light duty vehicles with EVs.

The MBARD Plug-In Monterey Bay EV Infrastructure Program has run for 5 consecutive funding cycles beginning in MBARD FY 2016-17. The total amount of program funding to date is \$5,942,687. The EV infrastructure Program installation breakdown is as follows:

- Level 2 Charging Stations: 106
- DCFC Stations: 35

Figure F-18: MBARD Light Duty EV Incentive Program

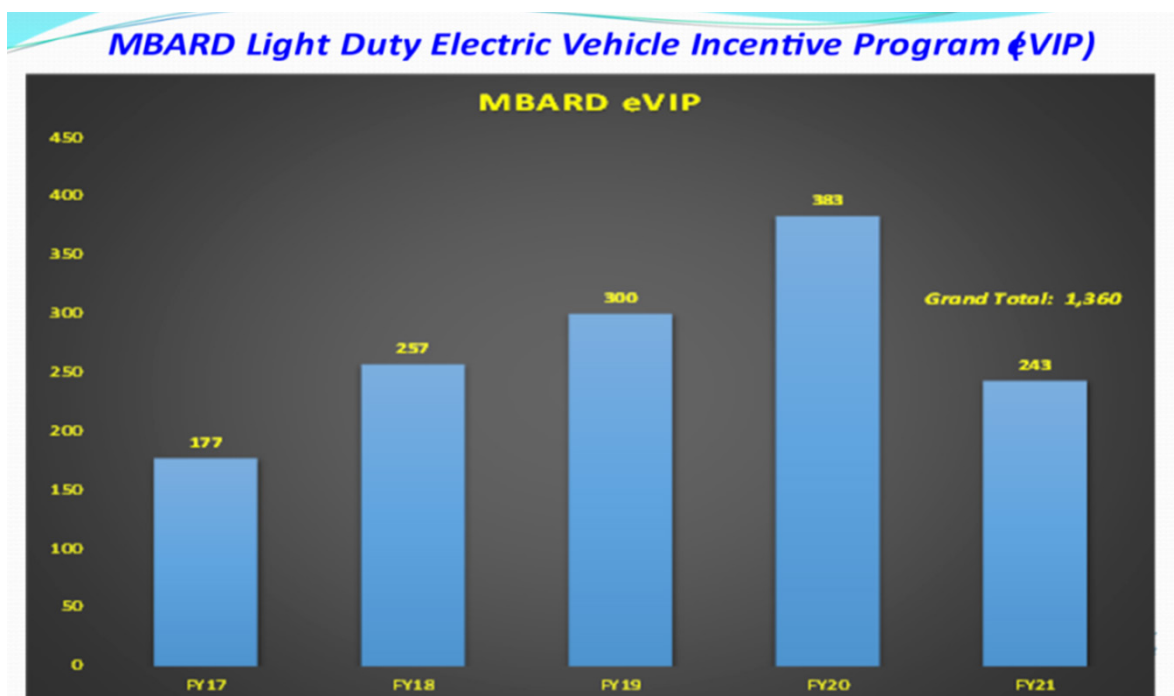


Figure F-19: GHG Calculation- Regional EV Chargers and EV Incentives Program

GHG calculation Regional EV Chargers and EV Incentives Program		
	2020	2035
Estimated Electric Vehicles Chargers	190	961
Daily eVMT	8,141	34,980
GHG reduction	3,554	15,269
Per capita GHG reduction	0.03	0.11

Data Source: MBARD and 3CE EV incentive program

EMFAC Model

AMBAG used the 2014 Emission FACTors model (EMFAC2014) to calculate GHG (CO₂) emissions for the SCS as required by California Government Code 65080. For the 2045 MTP/SCS EIR purposes, AMBAG used the most current 2017 Emission FACTors model (EMFAC2017) to calculate air quality impact analysis. EMFAC is a California specific air quality emission computer model developed by CARB that calculates daily emissions of air pollutants from all on-road motor vehicles including passenger cars, trucks and buses for calendar years 1970 to 2050. In the EMFAC model, the emission rates from each of the motor vehicle types are multiplied by the vehicle activity data to calculate vehicle emissions. The GHG emissions analysis for passenger vehicles, (LDA, LDT1, LDT2 and MDV vehicle types), uses the automobile VMT by speed class from the AMBAG RTDM model run for each scenario.



G

Performance Measures

Regional Performance Measures

Introduction

This appendix highlights the performance of the MTP/SCS for 2045. The performance of the Revenue Constrained network also is compared to other network scenarios, such as 2015 Existing and 2045 No Build.

The performance of the 2045 Revenue Constrained Network compared to existing conditions (2015), 2020, 2035 and the 2045 No Build is shown in Table G-1. In addition, this appendix includes the methodology to estimate the performance measures.

Table G-1: Performance Measure Results

Regional Performance Measures	2015 Existing	2020 MTP/SCS	2035 MTP/SCS	2045 No Build	2045 MTP/SCS
Access and Mobility					
Work Trips Within 30 Minutes (percentage)					
Drive Alone	85.1%	85.1%	84.4%	84.8%	84.3%
Carpool	85.1%	85.1%	84.4%	84.8%	84.3%
Transit	58.1%	57.6%	60.6%	59.5%	60.8%
Population Within 30 Minutes of Parks (percentage)					
Drive Alone	98.3%	98.4%	98.4%	98.4%	98.4%
Bike	97.5%	97.5%	97.6%	97.7%	97.7%
Walk	90.1%	90.1%	90.3%	90.3%	90.3%
Population Within 30 Minutes of Healthcare (percentage)					
Drive Alone	97.7%	97.7%	97.8%	97.9%	97.9%
Bike	90.7%	90.5%	90.3%	90.3%	90.3%
Walk	70.0%	69.3%	67.7%	67.3%	67.3%
Daily Vehicle Delay Per Capita (minutes)	3.36	5.34	5.37	6.96	6.13
Commute Travel Time (minutes)	15.3	15.4	15.5	15.5	15.6
Economic Vitality					
Population Near High Quality Transit (percentage)	15.3%	15.4%	25.9%	14.7%	30.0%
Jobs Near High Quality Transit (percentage)	12.0%	12.0%	23.8%	11.8%	24.8%
Daily Truck Delay (hours)	3,772	6,404	6,746	9,611	8,218
Environment					
GHG Reductions (Percent reduction from 2005 baseline) ¹	N/A	3.02	6.29	N/A	N/A
Open Space Consumed (acres) ^{2,3}	N/A	N/A	133	N/A	293
Farmland Converted (acres) ^{2,3,4}	N/A	N/A	837	N/A	2,635
Healthy Communities					
Growth in Opportunity Areas (percentage)					
Monterey County	N/A	4.4%	22.8%	32.9%	32.3%
San Benito County	N/A	25.4%	22.2%	21.8%	21.8%
Santa Cruz County	N/A	-3.9%	5.2%	7.0%	7.0%
Alternative Transportation Trips (percentage)	15.1%	14.8%	14.9%	14.6%	14.7%
Population Near Bike Facilities (percentage)	N/A	N/A	N/A	N/A	86.9
Jobs Near Bike Facilities (percentage)	N/A	N/A	N/A	N/A	90.5
Peak Period Congested Vehicle Miles of Travel (miles)	552,221	707,987	729,353	875,310	797,962

Table G-1: Performance Measure Results (continued)

Regional Performance Measures	2015 Existing	2020 MTP/SCS	2035 MTP/SCS	2045 No Build	2045 MTP/SCS
Social Equity					
Distribution of MTP/SCS Investments (percentage) ⁵					
Low income population	N/A	N/A	41.9%	N/A	81.7%
Non low income population	N/A	N/A	72.4%	N/A	83.6%
Minority population	N/A	N/A	41.9%	N/A	89.6%
Non minority population	N/A	N/A	72.7%	N/A	87.2%
Low mobility (zero car households and aged populations)	N/A	N/A	52.9%	N/A	71.5%
Low community engagement (linguistic isolation and education attainment)	N/A	N/A	32.6%	N/A	67.9%
Access to Transit within 1/2 mile (percentage) ⁶					
Low income population	9.9%	10.0%	14.3%	9.9%	14.4%
Non low income population	2.3%	2.4%	6.1%	2.3%	6.9%
Minority population	16.7%	16.9%	19.9%	16.8%	19.9%
Non minority population	0.7%	0.7%	7.4%	0.7%	8.1%
Low mobility (zero car households and aged populations)	0.6%	0.6%	1.6%	0.6%	1.6%
Low community engagement (linguistic isolation and education attainment)	1.2%	1.2%	1.4%	1.3%	1.4%
System Preservation and Safety					
Maintain the Transportation System (percentage)	N/A	N/A	60.5%	N/A	62.6%
Fatalities and Injuries per 1,000 VMT	0.02	0.03	0.05	0.06	0.06
Annual Projected Bike/Pedestrian Fatalities and Injuries per 1,000 VMT	0.005	0.006	0.005	0.004	0.004

1

Greenhouses gas reductions in 2020 are -3.0 percent per capita and a -6.3 percent per capita from 2005 levels.

²Rail projects are not reflected in the 2020, 2035 and 2045 MTP/SCS regionally significant project analysis, as rail lines are existing.

³2045 No Build scenario has increased open space due to farmland conversion per the 2045 MTP/SCS typology as identified by the city and county jurisdictions in SOI's.

⁴Farmland analyzed is Prime, Unique, or Farmland of Statewide Importance as defined by Dept. of Conservation FMMP.

⁵Calculated based upon criteria on total investment of all modelable projects within 1/2 mile of U.S. Census Bureau defined tracts.

⁶Tracts defined per U.S. Census Bureau. Calculated based per criteria on total acreage and percentage of population within a 1/2 mile of transit.

Methodology to Estimate Performance Measures

The methodology used to calculate the regional performance measures is detailed below. A variety of tools such as the Regional Travel Demand Model (RTDM), geographic information system (GIS), and EMFAC were used to estimate the performance measures.

Percent of Work Trips That Are 30 Minutes or Less By Mode

This performance measure is calculated by using the Regional Travel Demand Model. It is the work trips that are 30 minutes or less and divided by total work trips by mode: drive alone, carpool and transit.

Percent of Population That Are 30 Minutes or Less From a Park, By Mode

This performance measure was calculated using spatially referenced population data, provided by AMBAG's 2022 Regional Growth Forecast, and a point data set of federal, state, county, and local parks, validated from the California Protected Areas Database. 30 minutes travel time by mode (Drive Alone, Transit, Bike and Walk) were calculated by using average speed calculations for each mode. TAZ files from each scenario from the 2045 Regional Travel Demand Model (RTDM) were clipped by buffers to calculate the percent of population within the 30 minutes of parks buffer, for each mode.

Percent of Population That Are 30 Minutes or Less From Healthcare, By Mode

This performance measure was calculated using spatially referenced population data, provided by AMBAG's 2022 Regional Growth Forecast, and a point data set of all hospitals and community clinics in the AMBAG region, validated from employment data and Office of Statewide Health Planning and Development (OSHPD) data. 30 minutes travel time by mode (Drive Alone, Transit, Bike and Walk) were calculated by using average speed calculations for each mode. TAZ files from each scenario from the 2045 Regional Travel Demand Model (RTDM) were clipped by buffers to calculate the percent of population within the 30 minutes of parks buffer, for each mode.

Average Daily Vehicle Delay Per Capita

This performance measure is an output of the Regional Travel Demand Model (RTDM). To calculate the daily vehicle delay per capita, vehicle hours of delay were totaled for all classes and divided by the total population for each year/scenario.

Average Work Trip Travel Time

This performance measure is calculated by using outputs from the Regional Travel Demand Model. It is the work trip person hours of travel divided by total work trips (peak period).

Percent of Population Within ½ Mile of a High Quality Transit Stop

This performance measure was calculated using GIS. It is the populations within a ½ mile of all high quality transit stops divided by the total population in the region. Populations are calculated by using population data at the traffic analysis zone (TAZ) spatial level. Spatially referenced population data for the year 2015 was provided by AMBAG's 2022 Regional Growth Forecast and aggregated to the respective TAZs. The percentage of populations within a ½ mile of a high quality transit stop (HQTS) was estimated as an equivalent proportion of TAZ area within a ½ mile of an HQTS. In other words, the percent area of an individual TAZ within a ½ of an HQTS was applied to the total number of people within that TAZ. Those populations were then summed with all the rest of populations near an HQTS within the AMBAG region, using a ½ mile buffer in GIS. This process was conducted for each model year and scenario.

Percent of Jobs Within ½ Mile of a High Quality Transit Stop

This performance measure was calculated using GIS. It is the jobs within a ½ mile of all high quality transit stops divided by the total jobs in the region. Jobs are calculated by using employment data at the traffic analysis zone (TAZ) spatial level. Spatially referenced employment data for the year 2015 was provided by InfoUSA, and Employment Department Department (EDD), and aggregated to the respective TAZs. The percentage of employees within a ½ mile of a high quality transit stop (HQTS) was estimated as an equivalent proportion of TAZ area within a ½ mile of an HQTS. In other words, the percent area of an individual TAZ within a ½ of an HQTS was applied to the total number of employees within that TAZ. Those employees were then summed with all the rest of employees near an HQTS within the AMBAG region. This method assumes that employees are equally distributed throughout the TAZ. However, given that individual TAZs within urbanized areas (and therefore HQTS) are not spatially broad, the possibility of underestimating employment numbers near HQTS is low.

Daily Truck Hours of Delay

This performance measure is an output of the Regional Travel Demand Model (RTDM), and is calculated by multiplying the daily total vehicle hour delay by total number of trucks as reported by the RTDM.

GHG Emissions

This performance measure reports the CO₂ emissions for SB 375 vehicle types per capita based on outputs from the Regional Travel Demand Model and the California Air Resources Board's Emissions Factor (EMFAC) model. It is the daily pounds of CO₂ divided by total population as a percent reduction from the 2005 baseline.

Impacts to Sensitive Habitat Areas & Open Space

This performance measure shows the total acreage of open space consumed by development. In that regard it considers impacts to sensitive habitat only as it pertains to destruction of that potential habitat for development. The performance measures do not include a separate analysis for sensitive habitat, however a detailed discussion of the impacts to sensitive habitat can be found in the Environmental Impact Report. Calculation of the acreage of open space consumed by each scenario was performed at the parcel level using GIS by examining the changes between existing and alternative land use types for each scenario. To estimate the amount of open space consumed under any given scenario, the sum was derived of all parcel areas which changed from open space (undeveloped land) to developed land.

Farmland Preservation

Calculation of the acreage of agricultural land consumed by each scenario was performed using GIS at the parcel level by examining the changes between existing and alternative land use types for each scenario. To estimate the amount of farmland consumed under any given scenario, the sum was derived of all parcel areas which changed from "Important Farmland" (as defined by California Department of Conservation DOC, 2016A) to developed land.

Growth in Opportunity Areas

This performance measure was calculated using GIS. It shows the percent change in population within opportunity areas for each model scenario, compared to the baseline 2015. Population was calculated by using population data at the traffic analysis zone (TAZ) spatial level. Spatially referenced population data for each scenario year was provided by AMBAG's 2022 Regional Growth Forecast and aggregated to the respective TAZs. The percentage of the population within the opportunity area for each model year was estimated as an equivalent proportion of TAZ area within the opportunity area. Each model scenario's populations were then summed by county individually, and then summed regionally. The percent change for each model year was then calculated by subtracting model scenario data from the baseline 2015 data and dividing by base year data.

Alternative Transportation Trips

This performance measure is an output from the Regional Travel Demand Model. It is the total number of bike, walk and transit trips.

Percent of Population Within ½ Mile of a Bike Facility

This performance measure was calculated using GIS, and compiled bike facility data, provided by San Benito County Council of Governments, Transportation Agency of Monterey County and Santa Cruz County Regional Transportation Commission. Population data was an output of the 2045 Regional Travel Demand Model. Total population was summed for the TAZs and then used to calculate the percent of TAZ's population within a half mile of all classes of bike I, II, III, and IV.

Percent of Jobs Within ½ Mile of a Bike Facility

This performance measure was calculated using GIS, and compiled bike facility data, provided by San Benito County Council of Governments, Transportation Agency of Monterey County and Santa Cruz County Regional Transportation Commission. Employment data was an output of the 2045 Regional Travel Demand Model. Total employment was summed for the TAZs and then used to calculate the percent of TAZ's employment total within a half mile of all classes of bike I, II, III, and IV.

Congested Vehicle Miles of Travel

This performance measure uses the Regional Travel Demand Model. It is the total vehicle miles traveled at level of service, E and F (volume/capacity ≥ 0.86 for functional class 2 and where volume/capacity ≥ 0.90 for functional classes 3-7) divided by total vehicle miles traveled in the peak periods.

Distribution of MTP/SCS Investments

This performance measure is calculated using GIS. It is the dollar value of MTP expenditures serving low income and minority communities divided by total MTP expenditures. Note: this indicator provides a snapshot of MTP expenditures by geographic area. Other factors such as proximity to impacts of transportation projects and services are not reflected in this indicator.

Defining Disadvantaged Communities (Low Income and Minority)

The definition of minority individual was considered any non white or mixed race person according to the 2015 5-Year American Community Survey (ACS) data. Conversely, a non minority individual was considered any white or non Hispanic person. For the purposes of this analysis, a tract was considered to be predominantly minority if greater than 65% of the total population was non white. This is the same definition used in the adopted 2040 MTP/SCS.

AMBAG chose to use 200% of the federal poverty level for 2015 as the definition for low income. This reflects the higher cost of living in the AMBAG region. For the purpose of this analysis, a tract was considered predominantly low income if greater than 33% of residing families earned less than 200% of the federal poverty level annually.

Defining Low Mobility (Aged Population, Zero-Car Households and Disability)

Population aged 65 and over that had income below the poverty level are considered low mobility. For this analysis, a tract was considered low mobility if 15% of the population aged 65 and over had income below the poverty level.

Households that have zero-vehicle ownership fall into the low mobility category. For this analysis, a tract was considered low mobility if 5% of the households in the tract have zero-car ownership. Census reports disability in six categories: Hearing difficulty, vision difficulty, cognitive difficulty, ambulatory difficulty, self-care difficulty, and independent living difficulty. Tracts with 11.35 percent disabled population, or 20 percent above regional average, was selected.

Defining Low Community Engagement (Limited English Proficiency and Educational Attainment)

The definition of Limited English Proficiency (LEP) was considered households where English is not the primary language and English is not spoken “very well.” A tract was considered to have low community engagement if 15% of the tract were households where English is not spoken “very well.”

The definition of educational attainment was considered population over age 25 who have not earned a high school diploma. A tract was considered to have low community engagement if 15% of the tract is over the age of 25 without a high school diploma.

Equitable Transit Access

This performance measure was calculated using GIS. Existing and proposed transit were located based on information provided by RTPAs.

The percentage of the regionwide population of each sub-group who reside within a ½ mile of a current or proposed transit was calculated using available demographic data from American Community Survey. Income and minority data were available at the census tract spatial resolution. Race populations were quantified by the number of minority/non-minority individuals residing within a tract. Income information was quantified by the number of families (any two or more people living together related by marriage, birth, or adoption) with a combined income below predefined thresholds residing within a tract.

Since census tracts can span broad spatial distances relative to a ½ mile buffer, a method was needed to parse the sub-populations within large tracts. The percentage of families and individuals residing within a ½ radius of transit was estimated using the ratio within the buffered ½ mile to the total number within each respective census tract. This method was found to be adequate for estimating the percentage of people within a ½ mile radius of transit given the lack of detailed and consistent parcel level data available for the region.

Percent of Transportation Investments Towards Maintenance and Rehabilitation

This performance measure was calculated by taking the sum of maintenance and rehabilitation transportation investments divided by all transportation investments.

Annual Projected Accidents

This performance measure evaluates the safety of the transportation system by using data on injuries and fatalities to calculate a per capita rate of injury or fatality. This is a particularly difficult measure to project because it assumes that fatalities and injuries are held constant for every vehicle mile traveled. However, by establishing it as a performance measure in the 2040 MTP/SCS, this is the second Plan that monitors past injuries and fatalities, which allows AMBAG to monitor the effects of the Plan as it is implemented over the course of time. Data for accidents and fatalities obtained from the Statewide Integrated Traffic Records System (SWITRS) for the most recent years available, 2020.

Performance Management Rule 1 (PM 1): Safety System Performance Measures Report

The Fixing America's Surface Transportation Act (FAST Act) requires that MPOs provide a system performance report in the Metropolitan Transportation Plan evaluating the condition and performance of the transportation system with respect to established state performance targets. The 2022 State safety performance measurement targets are based on 5-year rolling averages as follows: Number of Fatalities - 3,491.8; Rate of Fatalities per 100M VMT- 1.042; Number of Serious Injuries per 100M VMT- 16,704.2; and Number of Non-Motorized Fatalities and Non-Motorized Severe Injuries- 4,684.4. AMBAG contributes to the achievement of these statewide goals by requiring all transportation agencies in the region to assure their projects meet transportation performance management goals in financial programming documents. These state performance targets are regularly updated. Beyond 2022, updated targets can be obtained by contacting AMBAG. The following provides a report on the five-year rolling averages for safety Performance Management (PM 1) Targets: (1) number of fatalities, (2) rate of fatalities per 100 million vehicle miles traveled (VMT), (3) number of serious injuries, (4) rate of serious injuries per 100 million VMT and (5) number of non-motorized fatalities and non-motorized serious injuries.

Number of Fatalities

Number of fatalities accounts for the number of motorized collision fatality victims in the AMBAG region. Multiple fatalities can result from each collision and this measure does not represent the number collisions throughout the region. Between 2015 and 2019 there were between 65 and 87 vehicular collision related fatalities in the region (see Figure G-1). In this same period the number of fatalities has decreased between 1% and 20% per year, except 2015-16 when fatalities increased. During an average year regional transportation

Table G-2: PM1 Safety System Performance Measures

PM 1 Safety Performance Measures	2015	2016	2017	2018	2019
Number of Fatalities					
AMBAG Region	78	87	86	81	65
5 Year Average	61	65.2	72.6	78.6	79.4
Rate of Fatalities per 100M VMT					
AMBAG Region	1.3	1.4	1.4	1.2	1.0
5 Year Average	1.0	1.1	1.2	1.3	1.3
Number of Serious Injuries					
AMBAG Region	310	314	336	508	421
5 Year Average	285.2	292.4	300.6	349.8	377.8
Rate of Serious Injuries per 100M VMT					
AMBAG Region	5.0	5.1	5.4	7.8	6.4
5 Year Average	4.7	4.7	4.9	5.6	5.9
Number of Non-Motorized Fatalities and Non-Motorized Severe Injuries					
AMBAG Region	73	101	102	115	90
5 Year Average	81.4	86.2	90.2	96.2	96.2

projects have been able to reduce fatalities and moving forward, safety related projects are expected to mediate the rate at which fatalities are increasing.

Rate of Fatalities per 100M VMT

Rate of fatalities per 100M VMT accounts for the number of motorized collision fatality victims per 100 million vehicle miles travelled (VMT) in the AMBAG region. Multiple fatalities can result from each collision, this measure does not represent the rate of collisions in the area. Between 2015 and 2019 the rate of fatalities per 100 million VMT, has generally declined or held steady, except 2015-16 when there was an 8% increase (see Figure G-2). This indicates that during an average year regional transportation projects have been able to reduce the rate of fatalities and safety projects are expected to continue this trend.

Number of Serious Injuries

Number of serious injuries accounts for the number of victims which were seriously injured as the result of motorized collisions in the AMBAG region. Multiple victims with serious injuries may result from each collision and this measure does not represent the number of collisions in the region. Between 2016 and 2020 the annual 5-year rolling average has increased between 1.5% and 14.1% (see Figure G-3). This indicates that historically the region has seen mild to moderately increasing vehicular related serious injury rates. Moving forward, regional transportation projects may contribute towards statewide serious injury reduction targets by reducing the rate of the increase.

Rate of Serious Injuries per 100M VMT

This measure accounts for the number of vehicular related serious injuries per 100 million vehicle miles travelled in the AMBAG region. Multiple serious injuries can result from each collision and this measure does not represent the number of collisions in the area. Between 2015 and 2019 the number of serious injuries has increased or held steady (see Figure G-4). This indicates that historically the region has seen moderately

increasing vehicular related serious injury rates. Moving forward, regional transportation projects may contribute towards statewide serious injury reduction targets by reducing the rate of increase.

Number of Non-Motorized Fatalities and Severe Injuries

This measure accounts for the number of non-motorized vehicle related fatalities or injuries as the result of collisions in the AMBAG region, specifically bicyclists and pedestrians. Multiple victims may result from each collision and this measure does not represent the number of collisions in the region. Between 2015 and 2019 this indicator has increased each year except for 2018-19 when there was a 22% decrease (see figure G-5). If this recent trend continues, the rolling average rate may decrease in the near future which would contribute towards statewide targets.

Performance Management Rule 2 (PM 2): Bridge and Pavement Performance Measures Report

The following provides a system report for the pavement and bridge condition Performance Management (PM 2) targets: (1) Percentage of NHS pavement in “good” condition, (2) Percentage of NHS pavement in “poor” condition, (2) Percentage of non-NHS pavement in “good” condition, (4) Percentage of non-NHS pavement in “poor” condition, (5) Percentage of NHS bridges in “good” condition, and (6) Percentage of NHS bridges in “poor” condition. See Table G-3 for a list of the 2022 2-year and 4-year targets for pavement and bridge condition. The State has taken on the responsibility of collecting and reporting on pavement and bridge condition data and provides this information to MPOs for evaluation of progress on these measures. AMBAG contributes to the achievement of these statewide goals by requiring all transportation agencies in the region to assure their projects meet transportation performance management goals in financial programming documents. In general, the region has contributed to achieving statewide bridge condition targets but not pavement condition targets. Future regional transportation projects will contribute towards pavement and bridge quality goals.

Table G-3: California Bridge and Pavement Condition Targets

Measure	2-Year Targets (1/1/2022 - 12/31/2023)		4-Year Targets (1/1/2022 - 12-31-2025)	
	Good	Poor	Good	Poor
Interstate Pavement on the NHS	47.2%	1.9%	49.2%	1.7%
Non-Interstate Pavement on the	21.7%	10.5%	28.2%	9.0%
NHS Bridges on the NHS	49.4%	5.8%	46.6%	4.6%

Table G-4: Pavement Condition

			2019 Pavement Condition			2017 Pavement Condition		
Total Lane Miles	% of Lane Miles		Good	Fair	Poor	Good	Fair	Poor
AMBAG Region	269	0.6%	7.5%	78.6%	13.9%	7.7%	84.0%	8.3%

Table G-4: Bridge Condition

	Total Structures	Total Deck Area (Sq. Ft.)	Total % Deck Area	2020 NHS Bridge Condition			2017 NHS Bridge Condition		
				Good	Fair	Poor	Good	Fair	Poor
AMBAG Region	12	144,280	0.06%	25.8%	36.7%	37.5%	11.1%	88.9%	0.0%

Pavement and Bridges in Good or Poor Condition

Most recently available data as of writing shows that AMBAG has 269 lane miles of roadway which is part of the NHS system. Lane miles are counted per lane. For example, one linear mile of two-lane NHS highway would count as two total lane miles. In the AMBAG region between 2017 and 2019 NHS pavement in good condition declined marginally from 7.7% to 7.5%. NHS pavement in poor condition went from 8.5% in 2017 to 13.9% in 2019. Between 2017 and 2020 bridges in good condition on the NHS went from 11.1% to 25.8%. Part of this increase in bridge condition was due to the replacement of the Pfeiffer Canyon Bridge which buckled and was condemned in the winter of 2017. In the same time period, bridges in poor condition increased from 0% to 37.5%. This decline in bridge condition was partially due to infrastructure damage from the 2020 fire season, including the CZU Lighting Complex Fire and the Carmel Fire.

Performance Management Rule 3 (PM 3): System Performance, Freight System, Congestion Mitigation and Air Quality Report

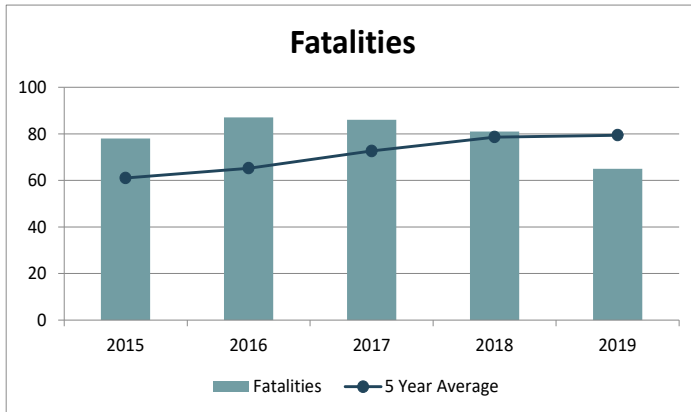
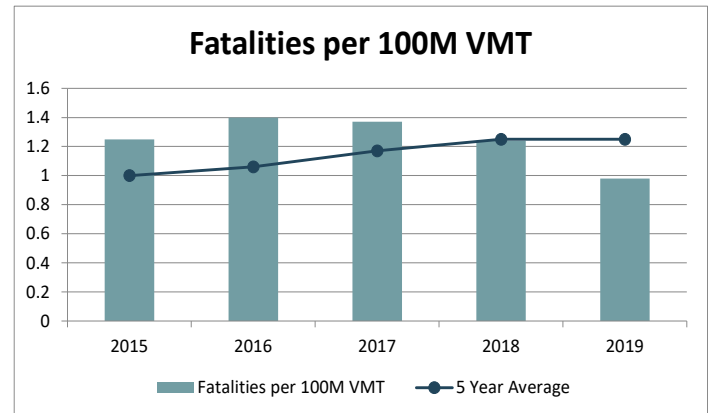
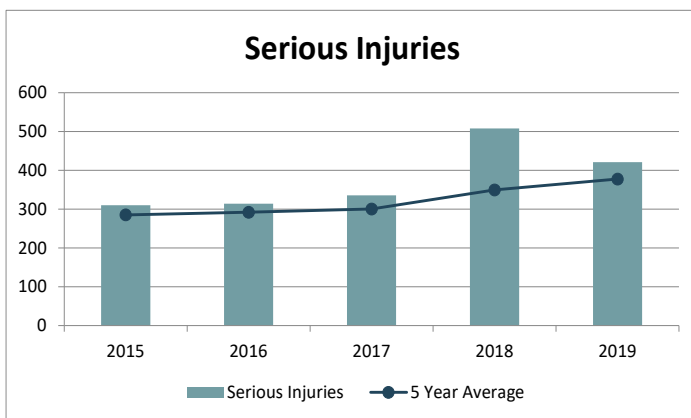
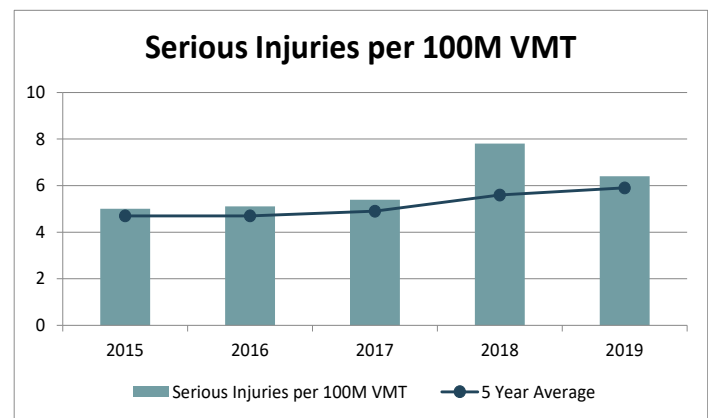
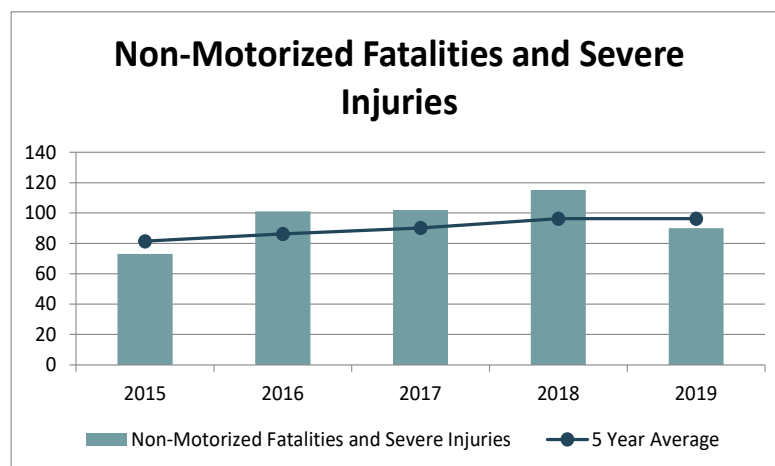
The following provides a system report for the system performance, freight system, congestion mitigation and air quality Performance Management (PM 3) target applicable to the AMBAG region: Percent of Reliable Person-Miles Traveled on the Non-Interstate NHS.

Percent of Reliable Person-Miles Traveled on the Non-Interstate NHS

While the State sets targets for seven measures related to PM 3, only one target applies to the AMBAG region: Percent of reliable person miles traveled on the non-interstate NHS. This measure is a Level of Travel Time Reliability (LOTTR) metric and is required to be used by states and MPOs in assessing system performance. LOTTR is defined as the ratio of the longer travel times (80th percentile) to a “normal” travel time (50th percentile), using data from FHWA’s National Performance Management Research Data Set (NPMRDS) or equivalent. Data are collected in 15-minute segments during all time periods between 6 a.m. and 8 p.m. local time. The measures are the percent of person-miles traveled on the relevant portion of the NHS that are reliable. Person-miles take into account the users of the NHS. AMBAG has exceeded the 4-year state travel time reliability goal since goals were set in 2018 with 80% or higher reliability scores. Future regional transportation projects are expected to contribute towards maintaining this high level of reliable person miles traveled.

Table G-5: Percent or Reliable Person Miles Traveled on Non-Interstate NHS

PM 3: Percent of Reliable Person-Miles Traveled on the Non-Interstate NHS					
	2016	2017	2018	2019	2020
AMBAG Region	73.6%	80.2%	80.6%	80.0%	93.3%

Figure G-1: Fatalities**Figure G-2: Fatalities per (100 m) VMT****Figure G-3: Serious Injuries****Figure G-4: Serious Injuries per (100 m) VMT****Figure G-5: Non-Motorized Fatalities and Severe Injuries**

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H Complete Streets

Introduction

The Monterey Bay Area Complete Streets Guidebook contains sample policies and engineering best practices that can be adopted by local jurisdictions to comply with California Complete Streets Legislation (AB 1358). Various complete street types are identified and defined in the guidebook, along with sample cross-sections, associated land uses and suggested roadway user prioritization. The complete street types provide design recommendations for various roadway arrangements. Another key component of the guidebook is a complete streets project review and design checklist. The checklist is a tool that can be used in planning and public works departments to identify opportunities for complete streets and document constraints or exemptions.

A unique component of the Monterey Bay Area Complete Streets Guidebook is a framework for evaluating the possible economic effects of complete streets. The economic framework categorizes potential effects of both direct and non-direct transportation impacts on investments, business activity, property values, and government fiscal health. The complete Monterey Bay Area Complete Streets Guidebook is attached.



Attachments

Monterey Bay Area

COMPLETE STREETS GUIDEBOOK



August 2013

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PARTNER AGENCIES



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ADVISORY COMMITTEES

Monterey County

Technical Advisory Committee

Bicycle & Pedestrian Facilities
Advisory Committee

Santa Cruz County

Interagency Technical Advisory
Committee

Bicycle Committee

Elderly & Disabled Transportation
Advisory Committee

San Benito County

Technical Advisory Committee

Bicycle & Pedestrian Advisory
Committee

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EXECUTIVE SUMMARY

People are the lifeblood of a community, and streets are its veins and arteries. Streets are vital to daily travel, economic exchange and maintaining an acceptable quality of life. Streets connect people to important destinations and serve as destinations themselves, as places to walk with friends, ride a bicycle, view public art, or enjoy the local farmers market. Although for many years streets have primarily been designed to serve automobile traffic, they are public places to be used by all people including non-drivers.

Local and State transportation policy has evolved from planning and designing almost exclusively for the movement of cars, to an increasing focus on the movement of people and goods. Complete streets policy and design embodies this paradigm shift by recognizing that

- (1) not all people travel by car, and
- (2) land use affects who uses the street and how that street should function.

The Monterey Bay Area Complete Streets Guidebook builds upon best practices from across the nation and was developed to assist local jurisdictions in planning, designing and implementing complete streets projects. Tools such as talking points to en-

gage decision-makers and community members and a project review checklist are included in the Guidebook and technical Appendix. The policies, processes and design treatments included in the Guidebook have been vetted, and refined by experts, planners, advocates and policy makers nationally and locally. The materials included in the Monterey Bay Area Complete Streets Guidebook builds on similar reports such as the Charlotte Department of Transportation Urban Design Guidelines, the Manual for Living Streets developed by the County of Los Angeles, the Smart Growth America Best Complete Streets Policy, and the Caltrans Complete Streets Action Plan. The contents of the Guidebook are summarized in the following sections.



EXECUTIVE SUMMARY

CHAPTER 1: GENERAL PLAN VISION, GOALS & POLICIES

This chapter of the Guidebook provides suggestions as to how communities can meet requirements of the Complete Streets Act (AB 1358) by incorporating complete streets policies into their general plans. Sample vision statements are provided in the chapter and complete street general plan policies can be found in Appendix B.

CHAPTER 2: COMPLETE STREET PERFORMANCE MEASURES

Performance measures indicate how well a street functions and meets the needs of all applicable users. Performance measures can also evaluate the effects of a policy or project on the performance of the system and to assess whether it has achieved its goal. The Guidebook provides a discussion of the 2010 Highway Capacity Manual methodology for calculating multimodal level of service as well as more qualitative performance measures.

CHAPTER 3: COMPLETE STREETS ACTION PLAN

The Action Plan of the Guidebook outlines strategies for coordinating intra-agency tasks to better integrate complete streets into the transportation design processes. A key component of the Action Plan involves providing complete streets design training to planners, civil and traffic engineers, project managers, plan review personnel, inspectors and other personnel responsible for design and construction of streets. A sample Action Plan is included as **Appendix D** to the Guidebook, and integrates complete streets into every step of community development in a way that can be tailored to the needs of each jurisdiction.

CHAPTER 4: COMPLETE STREETS TYPES

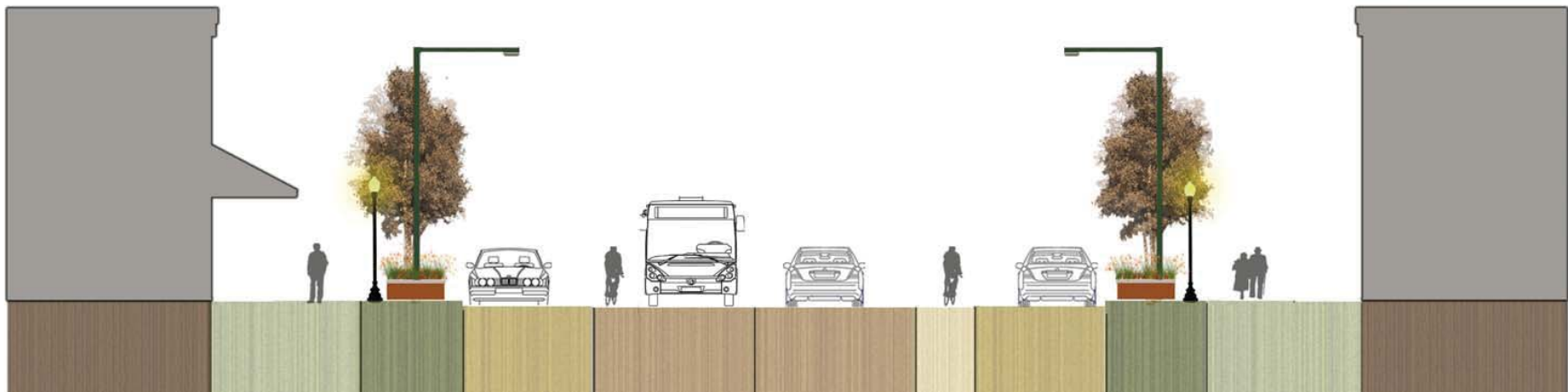
This chapter provides information to agency decision-makers on how to match the appropriate complete streets features to adjacent land uses and roadway users. This chapter introduces complete street types and a discussion of roadway user needs and design solutions.

EXECUTIVE SUMMARY

CHAPTER 5: COMPLETE STREETS DESIGN

This chapter provides best practices examples of street features to be considered when designing and engineering complete streets. Example cross-sections are included and organized by complete street type and by user zones. Additional bicycle facility treatments are shown in Appendix K.

Conceptual Cross-Section



EXECUTIVE SUMMARY

CHAPTER 6: IMPLEMENTING COMPLETE STREETS PROJECTS

The Guidebook outlines a 6-Step Process for implementing complete streets that involves defining the existing land use and transportation context, identifying deficiencies and goals for the future, determining the appropriate complete street type, considering alternative designs, and balancing the trade-offs between modes. Questions for each step of the process are included in Appendix I.

The Project Review Checklist in Appendix H of the Guidebook can be used to follow these 6-steps. The Checklist may be adopted by local jurisdictions to reveal opportunities for complete streets projects and document how the needs of all users were considered.

CHAPTER 7: TRANSITIONING TO COMPLETE STREETS

Frequently, the last steps in implementing complete streets are the most difficult, which involves enacting requirements and regulations and compiling funding to enable the development of complete streets improvements. Specific tools and strategies for addressing these challenges are described in this chapter.

CHAPTER 8: EDUCATION, ENCOURAGEMENT & ENFORCEMENT PROGRAMS

Education, encouragement, and enforcement programs complement complete street infrastructure and can play an important role in achieving community goals such as health and safety. This chapter identifies local education, encouragement and enforcement strategies.

CHAPTER 9: TALKING ABOUT COMPLETE STREETS

Complete streets are roadways designed and operated to enable safe access for all users. However, the meaning of complete street may vary between communities, applications or individuals. This chapter is intended to serve as a resource for professionals, decision makers and the public who are interested in discussing and educating others about complete streets concepts.

INTRODUCTION

PURPOSE

The Monterey Bay Area Complete Streets Guidebook provides resources and procedures for developing streets in the Monterey Bay Area that meet the needs of all users including non-drivers of all ages and abilities. Although great strides have been made by local jurisdictions across the Monterey Bay Area to provide adequate facilities for all roadway users, many streets are not “complete” in the Monterey Bay Area due to lack of sufficient bicycle and pedestrian facilities. In recognizing that roadways have primarily been designed to serve the automobile, the Monterey Bay Area Complete Streets Guidebook highlights bicycle and pedestrian access as an essential design objective.

The policy guidance and recommendations herein may be adopted by jurisdictions to address the following:

- Ensure future changes to roadways function well for all roadway users;
- Pursuant to the Strategic Growth Council grant, meet Sustainable Communities Strategies requirements in state law;
- Comply with California Complete Streets legislation (AB 1358);
- Adopt a planning process in which all roadway users considered;
- Reduce vehicle miles traveled and reach regional greenhouse gas targets pursuant to California law (SB 375); and
- Achieve objectives identified in local Climate Action Plans.

Unlike many guidebooks, which may be more prescriptive, the Monterey Bay Area Complete Streets Guidebook places greater emphasis on process and the importance of understanding the trade-offs between different design considerations. Balancing the needs of all roadway users can be challenging in the Monterey Bay Area, where right-of-way and funding is limited. The planning processes recommended by this guidebook seek to ensure that the resulting streets provide for the safety and comfort of all users to the greatest extent possible.

Goals of the Complete Streets Guidebook

- Provide tools for transitioning streets to complete streets
- Improve safety, especially for the most vulnerable users
- Facilitate understanding the impacts on communities of implementing complete streets policies
- Identify types of improvements needed to accommodate growth and address congestion in areas of compact development
- Better integrate land use and transportation to reduce vehicle miles traveled
- Establish a collaborative process for integrating planning and designing streets
- Serve as a resource for implementing the California Complete Streets Act (AB1358)



HOW TO USE THE GUIDEBOOK

Interested parties may use the Guidebook in whole or in part to address the following:

- Practice six steps to successfully implementing Complete Streets: addressing complete streets from planning and design to implementation (**Chapter 6: Projects and Implementation**)
- Incorporate Complete Streets into community plans (**Chapter 1: Vision , Goals and Policy**)
- Measure the effectiveness of complete streets policy (**Chapter 2: Performance Measures & Targets**)
- Provide a context for how Complete Streets can affect current systems and procedures (**Chapter 3: Complete Streets Action Plan**)
- Develop projects based on land use context and street functional classifications (**Chapter 4: Complete Street Types**)
- Design treatments for complete streets (**Chapter 5: Design Treatments**)
- Become familiar with tools for transitioning to complete streets (**Chapter 7: Transitioning to Complete Streets**)
- Learn about programs that enhance or are improved by complete streets projects (**Chapter 8: Education, Enforcement and Encouragement**)
- Communicate the benefits of complete streets and engage the community (**Chapter 9: Talking about Complete Streets**)

ADOPTION

This guidebook is suitable for full or partial adoption by local jurisdictions and regional agencies to guide the planning and design of streets. Adoption of this guidebook represents an agency's commitment to incorporate complete streets into policy, project evaluation, design, implementation, training, and public involvement. Jurisdictions may also adopt a complete streets ordinance or resolution that references the Monterey Bay Area Complete Streets Guidebook.

It is recommended that local and regional agencies that adopt or use this guidebook should:

- Review their approach to street design through all stages of the process, from advanced planning through preliminary design and construction;
- Update existing design manuals and training materials to address complete streets concepts;
- Incorporate a comprehensive range of policies which address complete streets in the general plan or regional plan;
- Support training for planners and engineers in complete street concepts and design considerations; and
- Seek ongoing public input from the community.

Adoption of the guidebook, in whole or in part, is a necessary first step in ensuring complete streets are consistently developed in the Monterey Bay Area. Agencies may have to take additional steps and modify their internal processes in order to fully and successfully implement the guidebook. Tools to assist local jurisdictions in these tasks can be found throughout the Monterey Bay Area Complete Streets Guidebook.

BACKGROUND

The Monterey Bay Area Complete Streets Guidebook was developed to address complete streets on local and regional scales. In 2011, the Association of Monterey Bay Area Governments (AMBAG), which serves as the Metropolitan Planning Organization for the three county region of Monterey, Santa Cruz and San Benito Counties, in coordination with the three Regional Transportation Planning Agencies (RTPAs) in each county, received a grant from the Strategic Growth Council to conduct a complete streets needs assessment and develop a complete streets guidebook specific to the Monterey Bay Area. In addition to addressing regional complete streets issues, the Guidebook is a tool to help jurisdictions meet State complete streets requirements. The California Complete Streets Act (AB 1358), passed in 2008, requires that any major revision of a jurisdiction's General Plan include modification to the circulation element to "plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads and highways" (California Government Code section 65302(b)(2)). Several jurisdictions in Santa Cruz, Monterey and San Benito Counties currently meet this requirement but many do not.

The Monterey Bay Area Complete Streets Guidebook will benefit the entire region by encouraging bicycle, pedestrian and transit usage. The Metropolitan Transportation Plan (MTP) is prepared by AMBAG in cooperation with the RTPAs to plan for the long-range transportation needs of the region over the next 25 years. Pursuant to California Senate Bill 375, the MTP incorporates a Sustainable Communities Strategy and a transportation and land use strategy that will achieve regional greenhouse gas emissions reduction targets established by California Air Resources Board. The regional targets are: a 0% increase in greenhouse gas emissions by 2020 and a 5% reduction from 2005 greenhouse gas levels by 2035. Implementation of complete streets projects will contribute to reductions in greenhouse gas emissions by providing safe, convenient alternatives to driving.

The Monterey Bay Area Complete Streets Guidebook builds on best practices from across the nation. The policies, processes and design treatments included in the Monterey Bay Area Complete Streets Guidebook have been vetted, refined, and approved by experts, planners, advocates and policy makers nationally and locally. The materials included in the Monterey Bay Area Complete Streets Guidebook include references from similar documents such as the Charlotte Department of Transportation Urban Design Guidelines, the Manual for Living Streets developed by the County of Los Angeles, the Smart Growth America Best Complete Streets Policy, and Caltrans Complete Streets Action Plan.

Complete streets are being incorporated into every level of transportation planning in the Monterey Bay Area from the Metropolitan Transportation Plan and Regional Transportation Plans to local plans and projects.



Metropolitan
Transportation
Plan/SCS



Regional
Transportation
Plans



Local General
Plans



Area Plans



Local Projects

WHAT ARE COMPLETE STREETS?

Complete streets are roadways designed to safely and comfortably accommodate all users, including, but not limited to motorists, cyclists, pedestrians, transit and school bus riders, delivery and service personnel, freight haulers, and emergency responders. Complete streets accommodate people of all ages and abilities. Complete streets expand transportation choices by making walking, bicycling, and public transportation more convenient and safe. This includes consideration of varying levels of tolerance for traffic stress when choosing a transportation mode, particularly as it relates to bicycling.

The Monterey Bay Area Complete Streets Guidebook does not prescribe “one size fits all”. Complete streets facilities should look different depending on the surrounding land use context and user needs. Each street in a complete streets network is designed to provide safe accommodation for the various intended users. This does not mean all streets must be designed to equally support all users. Instead, a diverse palette of street design options that consider the location, land uses, and multimodal transportation volumes should be considered.

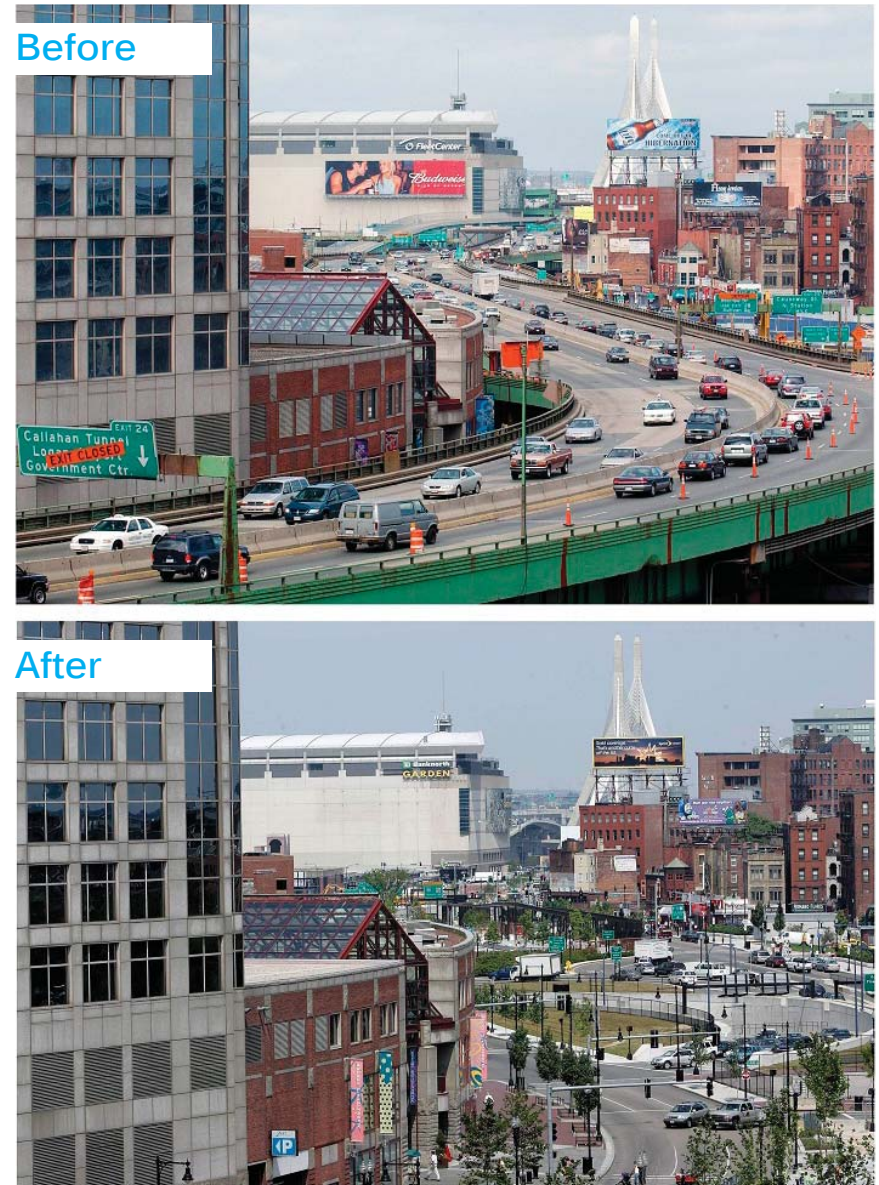


WHY COMPLETE STREETS?

More and more complete streets are being developed across California as decision-makers realize the value they add to their communities. Complete Streets projects address user needs across multiple modes, and provide numerous individual and community-wide benefits; although trade-offs between modes are often required in areas where there are right of way and funding constraints.

Improving access to goods and services has long been an important transportation goal and has guided transportation policy, facility design and measures of success. Historically the focus has been on accessibility for motorists to goods and services. Concentrating all efforts on one mode of transportation meets the needs of only a portion of roadway users. Complete streets can more fully improve a transportation network by increasing accessibility and mobility for non-motorized modes and addressing trade-offs between modes.

“Big Dig” Boston, MA



User Needs

The need for diverse transportation systems has existed among non-drivers for many years. In recent years there has been an increasing demand for alternatives to the automobile from individuals who historically have chosen to drive. Young people in particular are opting to ride the bus, bicycle and walk in greater numbers and fewer young people have driver's licenses or own automobiles than previous generations.

The number of older, low-income and disabled non-drivers is also increasing, as is the need for alternative ways to get around. An aging population may mean higher demand for public transit and in particular, paratransit. Restructuring existing transportation systems to address special needs can benefit not only the users of the system but also the service provider. Monterey-Salinas Transit, for example, has started a senior shuttle service in the Carmel Valley Area to begin meeting this new demand. The smaller senior shuttle vehicles allow for increased route flexibility and lower fuel demand, which benefits both transit riders and Monterey-Salinas Transit.

Today, the majority of Monterey Bay Area residents use an automobile as their primary mode of transport. Congestion and safety are the two greatest concerns of automobile drivers. Like other transportation investments, complete streets may impact local automobile congestion, automobile access, traffic patterns in neighborhoods, and parking. Potential impacts are dependent on the local context, application and design timeframe.



Cost-Effectiveness

Complete streets can be affordable to users and implementing agencies. The cost of transportation is increasing relative to fuel prices. For many American households the cost of car ownership is the second largest monthly expense after housing. Households that are dependent upon daily automobile use spend more income on transportation and have less disposable income (See Figure 0-1). Rising transportation expenses have a negative effect on the local economy and particularly on low income individuals with limited mobility many of whom are seniors and those under eighteen. In the face of rising automotive transportation costs, complete streets provide more affordable transportation options such as riding the bus, bicycling and walking.

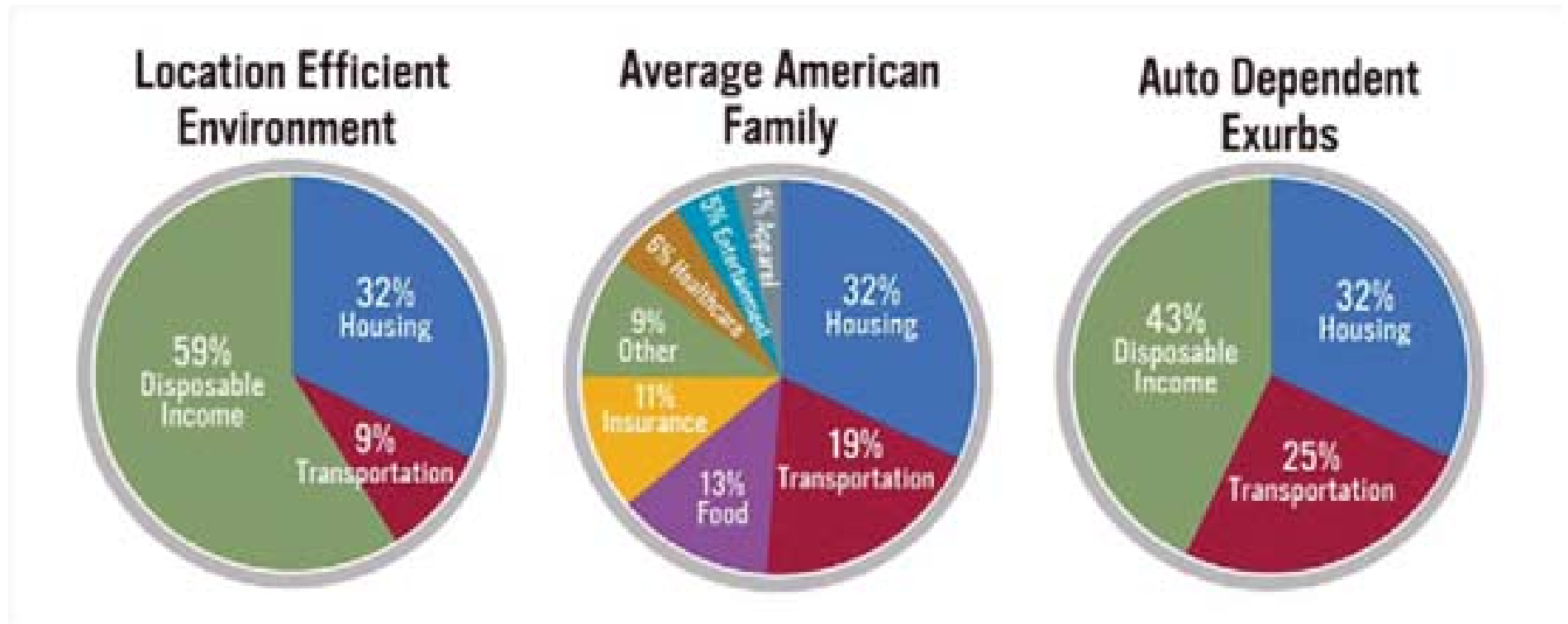


Figure 0-1: U.S. Department of Transportation

When it comes to implementing complete streets, jurisdictions can incorporate complete streets elements into currently planned projects by incorporating them in the early design stage. A cost-effective way to develop complete streets projects is to re-evaluate pending roadway projects and identify opportunities to accommodate additional users within the existing right-of-way.

For example, a standard resurfacing/restriping project could be modified to undergo a road diet or provide striping for bicycles at intersections. A road diet reduces the number of travel lanes, typically from four to two and adds a center left-turn lane and bicycle lanes or bicycle lanes and a sidewalk (Figure 0-2). Striping bicycle lanes at intersections dedicates space and indicates where the bicyclist should position themselves in order to cross more safely. These types of project can benefit all users of the roadway by providing a smoother road for drivers, decreasing conflicts between bicyclists and motorists, and creating greater separation between automobile traffic and pedestrians on sidewalks.

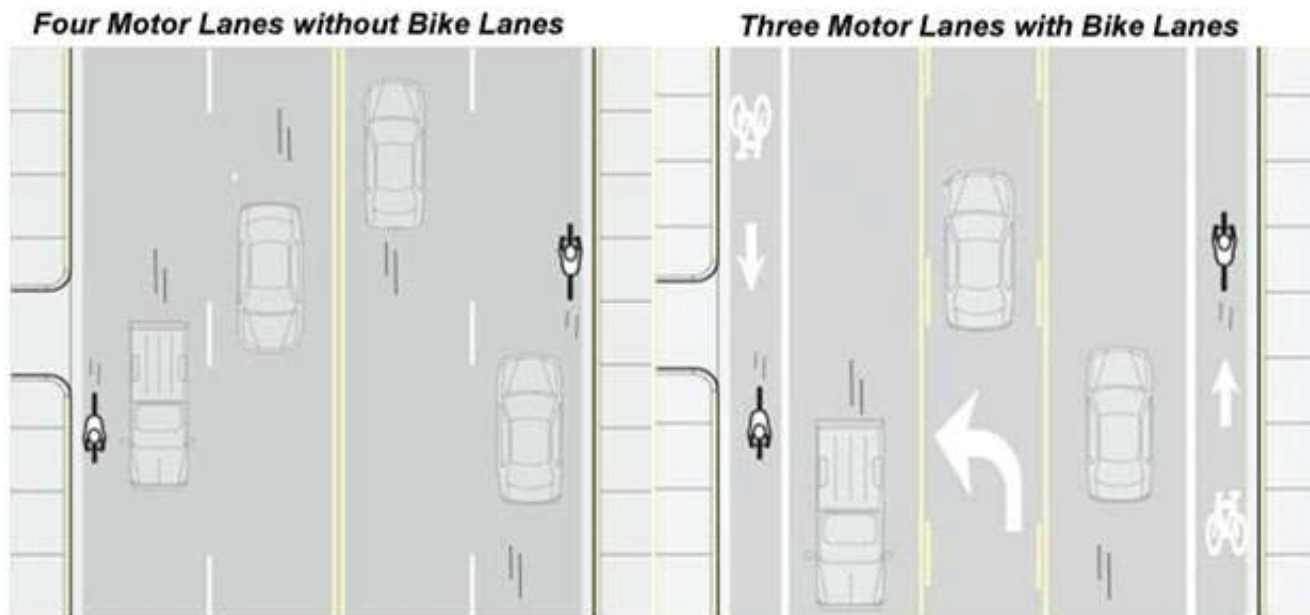


Figure 0-2: Road Diet Before and After (nozziwalkablestreets.com)

Benefits

Complete Streets can provide the following benefits:

Transportation Equity - Different travelers may expect varying accommodations by a street. A street design that works well for a motorist may not work well for a pedestrian or a bicyclist. People experiencing poverty or language barriers, people of color, older adults, youth, people with disabilities and other groups with limited or no access to a vehicle tend to experience a disproportionately small share of benefits from transportation investments focused on motorists. Complete street design attempts to restore equity in the transportation system by improving transportation options for non-drivers and enabling greater use of the transportation system.

Safe, Convenient and Attractive Travel Choices - Surveys throughout the Monterey Bay Area indicate residents desire to have a greater number of transportation choices. Typically, the primary reason given for not using non-motorized transport is safety concerns. Complete street design emphasizes safe and convenient travel choices for all modes.

Reduced Traffic Congestion - Increasingly more people are choosing not to drive and some are moving into cities where there are more transportation options. Complete streets can provide attractive choices for individuals who desire an alternative to automobile; thereby decreasing automobile volumes.

Increased Roadway Capacity – While populations continue to grow constraints such as environmental, physical and cost limit the opportunity to increase roadway capacity with more travel lanes. Complete streets can accommodate more people if they are complete and support travel by bus, bicycle or on foot, instead of by car.



Healthy Communities, Economy and Environment – There is a correlation between a diversified transportation network and healthier communities, and a stronger economy and a cleaner environment. By encouraging active transportation such as walking and cycling, complete streets can result in improved health for residents. Reduced GHG and criteria pollutant emissions may result in reduced incidence of respiratory disease. These factors have the potential to keep the local workforce healthier and more productive.



Improved Access for People with Disabilities - Individuals with disabilities are more likely to use the sidewalk network and take transit. Yet, roadways are often difficult to navigate for people who use wheelchairs, have diminished vision, can't hear well, or for people who move slowly. Complete streets policies can have the effect of removing barriers to independent travel by designing facilities to meet the needs of all users.



Reinvestment in the Local Economy – Improved complete streets will incentivize non-automotive modes of travel which are less expensive than driving and vehicle ownership. By reducing vehicle related expenses for commuters, they will have discretionary incomes which can be invested locally.



Economic Activity- Property values, business activity, redevelopment, fiscal health of governments and economic growth can all be positively impacted by complete street investments as a result of increased trip volumes, improved trip quality, benefits to safety and health, potential reductions in construction and maintenance costs, and provisions for new public amenities. A detailed discussion of the correlation between complete streets and economic activity is included in Appendix J.

HOW TO BALANCE ROADWAY USERS NEEDS

All of the possible benefits derived from complete streets investments must be evaluated in the context of how they affect the transportation network as a whole and the tradeoffs between alternative investments. For instance, prioritizing bicycle and pedestrian facilities on neighborhood streets may have potential impacts on automobile congestion, automobile access, traffic patterns, and parking. In contrast, prioritizing automobile facilities can have impacts on bicycle and pedestrian safety, and access, and may reduce opportunities for convenient alternatives to driving. The impacts on congestion and safety for all modes must be considered in the discussion of tradeoffs between modes as it relates to complete streets planning and design.

Despite challenges, many local jurisdictions in the Monterey Bay Area have made significant investments in bicycle and pedestrian infrastructure during the past two decades in an effort to serve a larger and more diverse group of roadway users. The result has been a considerable improvement in the bicycle network and pedestrian facilities. However, in many cases bicycle and pedestrian facilities are not provided when projects are constrained by right of ways or lack of funding. Prior planning practices have supported an approach to project design that emphasizes maintaining the existing roadway function first and adding bicycle and pedestrian improvements only where space and funding allow. In some cases a street may have been made more complete had alternative designs been considered. The trade-offs between investments can be challenging and the balance between modes is a result of a complex factors.

The tools provided in the Monterey Bay Area Complete Streets Guidebook, and discussed in detail below, are intended to support a transparent discussion of trade-offs amongst design features and roadway users and encourage evaluation of design alternatives. Consideration of all roadways users current and future needs using the complete streets framework promoted in the Monterey Bay Area Complete Streets Guidebook should result in cost-effective investments that provide convenient and safe facilities for all modes in the most appropriate locations.

Chapter 1: General Plan Vision, Goals and Policies

This chapter of the Monterey Bay Area Complete Streets Guidebook provides suggestions as to how communities can meet requirements of the Complete Streets Act by incorporating complete streets policies into general plans. Although the California Complete Streets Act requires complete streets policies only in the circulation element, the most effective policies are present or supported in more than one element of the general plan.

Guidance for developing a vision statement and circulation element and land use element goals are provided in this chapter and in Appendix B.

VISION

The vision statement of a general plan encapsulates community values and desires and provides inspiration for goals and policies. Developing a vision statement that considers complete streets is often a precursor to adopting complete street goals and policies. A vision statement may be included in the circulation element of the general plan focusing entirely on the community's vision, or may appear at the beginning of the circulation element. Vision statements are generally developed through a consensus-driven, collaborative community engagement process. When developing a vision statement the following questions should be considered:

- **What are the benefits of adopting a Complete Streets policy in our community?**
- **What reason for adoption (such as health, safety or providing transportation choice) will consistently rally support from the community, its transportation professionals and its leaders?**
- **What is our vision for Complete Streets?**

The model vision language below is provided to offer an example of a detailed vision statement and demonstrate the range of goals that can be considered in setting out a statement.

Sample Transportation Vision Statement

“The community of [Jurisdiction] envisions a safe, balanced and environmentally-sensitive multi-modal transportation system that supports greater social interaction, facilitates the movement of people and goods, and encourages active living, mobility independence, and convenient access to goods and services for all users including but not limited to pedestrians, bicyclists, children, seniors, persons with disabilities, motorists, movers of commercial goods and transit”

GOALS & POLICIES

Communities may include the entire sample complete streets policy in the general plan circulation element as a complete policy package, or may selectively adopt specific objectives or policies. Communities are encouraged to tailor the policy and implementation measures to local needs, concerns, and conditions, and to identify the local agency or department responsible for implementation. Most circulation elements already include goals, objectives, and policies addressing the needs of motorists and movers of commercial goods, so the suggested complete streets goals and policies focus on other types of users.

Sample general plan goals and policies are included as in Appendix B.

Chapter 2: Performance Measures

Performance measurement is an important tool in the implementation of complete streets. Performance measures can inform planners, decision makers and public how effective complete streets policies and projects are at reaching community goals. Performance measures are particularly important in today's environment where there is strong competition for limited transportation funds. In grant funded projects, results must be demonstrated using performance measures.

The Monterey Bay Area Complete Streets Guidebook provides a list of relevant performance measures for evaluating the effectiveness of complete street policies and projects. The suggested performance measures may be used in several different ways to facilitate the implementation of complete streets policies. First, performance measures can be used for needs assessment to identify problems in the system and to assess their relative severity. Second, performance measures can be used to rank projects for funding in the programming process. Third, performance measures can be used in impact assessments. In this application, the probable impact of a proposed development project on the performance of the street system is projected, and the result is used as the basis for impact fees or other exactions, such as requirements to provide bicycle and pedestrian facilities. Fourth, performance measures can be used to evaluate the effects of a policy or project on the performance of the system and to assess whether it achieved its goal.

Table 1 lists performance measures that can be used to gauge the effectiveness of five complete streets policy objectives (safety, health, access, economic benefit and equity). These suggested performance measures support the goals of the Metropolitan Transportation Plan and the Regional Transportation Plans for Monterey, Santa Cruz and San Benito Counties.

Using consistent methodology for collecting before and after data is important when measuring performance. Best practices for data collection, such as the establishment of a consistent way of conducting bicycle and pedestrian is helpful to demonstrate changes in trends over time that may result from the implementation of complete streets. The Santa Cruz County 2012 Bike and Pedestrian Count Report aimed to standardize methodologies for bicycle and pedestrian counts done within the county using the Institute of Transportation Engineers Pedestrian and Bicycle Council recommend methods and includes templates and instructions for data collection.

MEASURES OF EFFECTIVENESS

Table 1: Complete Streets Performance Measures

	Measure	Source
Safety	Reduce collisions involving bicycles and pedestrians	SWITRS counts
	Improve speed suitability through street design	Number of bicycle routes on low speed streets
	Increase the number of local traffic calming plans	Number of traffic calming plans adopted by local jurisdictions
	Decrease the number of citations for jaywalking, reckless behavior or missing helmet (if under 18 years)	Pedestrian and bicycle observation surveys
	Reduce the number of bicycle and pedestrian hazards	Number of bicycle and pedestrian facilities repaired
Health	Increase the percent of people who walk, bike and take transit	American Community Survey or local survey
	Increase the number of students walking, bicycling or taking transit to school	Bicycle and pedestrian counts and surveys
	Increase the number of events that promote alternative transportation	Number of events held in Santa Cruz County that promote alternative transportation
Access	Number of households within 1/4 mile of transit stop	
	Increase the percent of people who walk, bike and take transit	American Community Survey
	Decrease transit headways on high quality transit corridors	Santa Cruz Metro
	Improve the quality of walk, bike, and transit trips	MMLOS or QOS
	Increase the % of population within a 30 minute walk, bike or transit trip of key destinations	GIS Street Network and Place Type Designations
Economic Benefit	Increase property values	Tax assessment
	Increase business activity	Taxable sales
	Increase investment	Number of new commercial and residential investments
	Government fiscal health	Cost per mile of transportation improvements
Equity	Increase the number of improvements completed near key destinations for transportation disadvantaged populations such as near schools, hospitals, transit stops	GIS Project Location and Key Destinations

LEVEL OF SERVICE

The traditional performance measure for street design is Level of Service (LOS). A methodology for calculating Level of Service can be found in the current version of the Highway Capacity Manual (HCM) published by the Transportation Research Board. This measure, in all its forms, is a function of the ratio of the number of cars on a road to the road's carrying capacity, and is expressed by assumed delay for each vehicle. Historically, it has been used to calculate how much road capacity is needed to serve a given volume of vehicles, and it is directly tied to the goal of reducing automobile congestion and delay. In most common use, LOS is reported on an A through F scale, with LOS A representing free-flowing automobile traffic, and F representing complete congestion. Although it has the advantage of being highly standardized and widely used, traditional vehicular LOS measurement does not account for all users of a roadway nor tradeoffs between different modes. This results in facility design based solely on the needs of automobile users often at the expense of others.

The revised version of the Highway Capacity Manual, adopted in 2010, includes methods (referred to as Multimodal LOS), for measuring the quality of travel for bicyclists and pedestrians, including comfort and sense of safety. In the absence of established standards, communities have been developing their own methods for measuring LOS for bicycles, pedestrians, and transit. In general, bicycle, pedestrian, and transit levels of service tend to be more complex to measure than vehicle LOS.

One of the common concerns with using Multimodal Level of Service is that it requires a substantial amount of data that may not be regularly or reliably collected. If data does not exist for the study area, new data must be collected in order to utilize this performance measure, which can be time intensive and expensive. Some communities are not pursuing new LOS measures, but instead are choosing more qualitative measures of success. The Santa Cruz County Regional Transportation Commission recently tested a Quality of Service (QOS) measure to evaluate how transportation investments affected the quality and convenience of bicycle, pedestrian and transit trips (Appendix C). The performance measures recommended in Table 1 provide a range of options for evaluating the effectiveness of complete streets policies and projects while recognizing limited data and resources available to project sponsors.

Chapter 3: Action Plan

Successful implementation of complete streets requires collaboration amongst several departments and stakeholders at the policy, planning, project delivery and maintenance and operations levels. The Action Plan of the guidebook outlines the requirements for coordinating inter-departmental tasks. A key component of the Action Plan involves updating training practices for planners, civil and traffic engineers, project managers, plan reviews, inspectors and other personnel responsible for design and construction of streets to integrate complete streets. A sample Action Plan is included as Appendix D, which integrates complete streets into every step of community development in a way that can be tailored to the needs of each jurisdiction. For example, instructions and training could be instituted for maintenance crews to assure their work complies with complete streets policies. Resources for updating specific manuals are also provided in Appendix D.

LEGAL STANDING OF STREET MANUAL

Local jurisdictions generally follow certain established standards for designing streets. Confusion can exist as to which standards to follow, what is merely guidance, when jurisdictions can adopt their own standards, and when they can use designs that differ from state standards. It is critical for cities and counties to understand how adopting the Monterey Bay Area Complete Streets Guidebook in part or in whole meshes with other standards and guides Appendix E discusses the myriad of accepted design documents and is based on the Los Angeles County Model for Living Streets Design Manual discussion of design documents.

Chapter 4: Complete Streets Types

Complete streets are context sensitive. The intent of this chapter is to provide information on how to match relevant street elements to the existing or desired land uses along the street and the roadway users. This chapter includes a description of complete street types to provide project sponsors with a template for roadway designs that serves all users and prioritizes modes based on the land use and transportation context.

LAND USE CONTEXT

Place types developed by AMBAG in coordination with local jurisdictions are used in the Monterey Bay Area Complete Streets Guidebook to describe the complete streets land use context. These place types were established during the development of the Sustainable Communities Strategy to create common classifications for similar land uses across the Monterey Bay Area.

Place types consider land use characteristics (ex. urban, town, neighborhood, suburban, and rural) as well as use (ex. residential, commercial, institutional). Each place type creates a distinct context for land use and transportation investments. Applying place types can help the guidebook user identify complete street features that fit the land uses being considered. A detailed description of place types adopted by AMBAG for use in developing the Sustainable Communities Strategy is included in Appendix F.



COMPLETE STREET TYPES

The complete streets types take into consideration various user perspectives and the surrounding land use context in addition to the street function. The complete streets types described in this chapter serve as a tool for linking street functional classifications and land uses. Figure 4-1 demonstrates how complete streets types relate to traditional functional classifications.

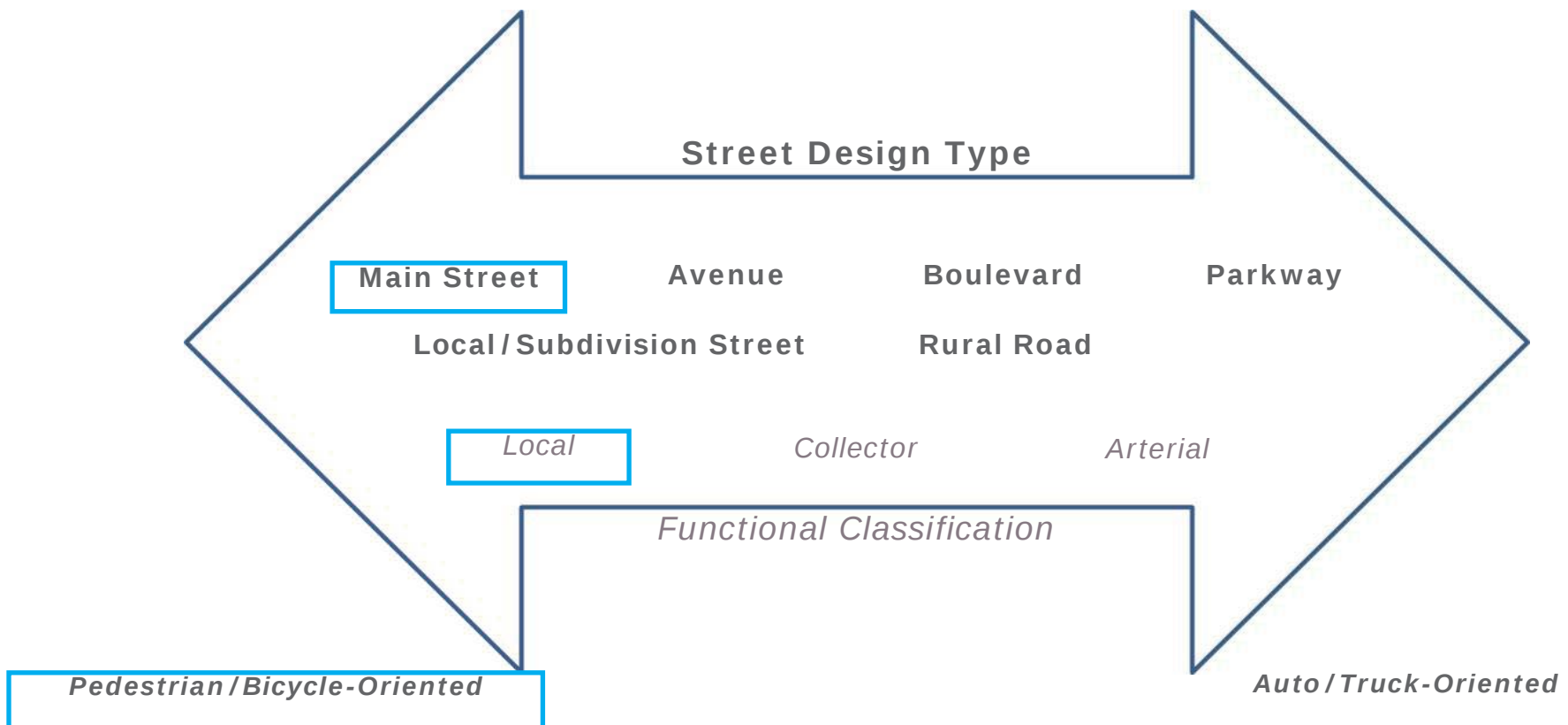


Figure 4-1 Complete Street Design Type and Functional Classification

Table 2 names complete streets types and provides a description of the transportation and land use attributes associated with each type. The land use place types developed through the Sustainable Communities Strategy planning process (**Appendix F**) are also listed. Each of complete street type indicates which roadway users should be prioritized based on land use and transportation context. Both the land use place type and complete street types should be identified early on in the process of planning and designing streets. Cross sections for each complete street type are included in Chapter 5: Complete Streets Design. Illustrative cross sections for complete streets types are based on the Charlotte Department of Transportation: Urban Street Design Guidelines, 2007.

For specific design treatments to considering when developing complete street cross sections see Chapter 5: Complete Street Design.

Main Street (Pacific Avenue, Santa Cruz)



Rural Road (Blanco Road, Monterey County)



TABLE 2: COMPLETE STREET TYPES

SEGMENT TYPE	TRANSPORTATION & LAND USE DESCRIPTION	USER PRIORITIZATION	LAND USE PLACE TYPES	EXAMPLES
Main Streets	Pedestrian-oriented “destination” streets; land uses: mixed-use, commercial, entertainment, office, civic; short blocks, grid street pattern; can be used as a flexible space for community events (ex:// .farmers markets)	1. Pedestrians 2. Bicyclists 3. Transit 4. Autos/Trucks Special accommodations for delivery trucks	Urban Commercial; Urban Mixed-Use; Town Commercial; Town Mixed-Use; Rural-Town Commercial; Institutional	Alvarado Street (Monterey); Ocean Ave (Carmel); Pacific Ave (Santa Cruz); Main St (Salinas)
Avenues (collector)	Bicycle and transit-oriented streets connect neighborhoods to job centers and commercial areas. Higher speeds than main streets; land uses: diverse mix of land uses including but not limited to residential, schools, parks, neighborhood commercial and commercial	1. Bicyclists 2. Pedestrians 3. Transit 4. Autos/Trucks Special accommodations for pedestrians (children and seniors) at crossings	Urban Multi-Family Residential; Multi-Family Residential; Neighborhood Commercial; Town Multi-Family Residential; Town Mixed-Use; Institutional; Open Space/Recreation	Sloat Ave (Monterey); California St (Santa Cruz)
Boulevards (minor arterials)	Higher speeds and volumes of automobile traffic than avenues, but more pedestrian and bicycle-friendly than parkways	1. Transit 2. Autos/Trucks 3. Bicyclists 4. Pedestrians	Multi-Family Residential; Neighborhood Commercial; Regional Commercial; Employment Center; Neighborhood Mixed-Use; Institutional; Open Space/Recreation	Munras Ave (Monterey); Capitola Rd (Live Oak/Capitola Branciforte Ave (Santa Cruz)
Parkways (major arterials)	Auto-oriented designed to move high volumes of vehicular traffic quickly; land uses: major destinations such as regional commercial, academic institutions and visitor-serving uses	1. Autos/Trucks 2. Transit (BRT/Rail) 3. Bicyclists 4. Pedestrians	Regional Commercial; Employment Center; Airport; Institutional; Open Space/Recreation	Imjin Parkway/Rd (Marina); Soquel Drive (Aptos); Canyon Del Rey (Del Rey Oaks); Ocean Street (Santa Cruz)

TABLE 2: COMPLETE STREET TYPES

SEGMENT TYPE	TRANSPORTATION & LAND USE DESCRIPTION	USER PRIORITIZATION	LAND USE PLACE TYPES	EXAMPLES
Local Streets	Low-speed and low-traffic volume shared streets (bicycle, pedestrian & auto) with on-street parking; land uses primarily residential, neighborhood commercial, office, mixed-use, schools and parks	1. Pedestrians 2. Bicyclists 3. Autos/Trucks 4. Transit	Urban Single-Family Residential; Urban Multi-Family Residential; Urban Mixed-Use; Single-Family Residential; Multi-Family Residential; Town Single-Family Residential; Town Multi-Family Residential; Rural Town Residential; Institutional; Open Space/Recreation	Cayuga (Santa Cruz); Riverview Drive, Capitola; San Miguel Ave, Salinas;
Rural Roads	Mostly auto-oriented with few bicycle facilities for agricultural workers and long-distance cyclists	1. Autos/Trucks 2. Transit 3. Special accommodations for school buses 4. Bicyclists 5. Pedestrians	Agriculture and Rural Residential; Exurban Residential; Industrial and Manufacturing; Open Space/Recreation	Corralitos Road (Santa Cruz); West Beach St, Santa Cruz County; Old Stage Rd, Monterey County;
Scenic Roads	Mostly auto-oriented with bicycle facilities, some pedestrian facilities and access to natural resources	1. Autos 2. Bicyclists 3. Pedestrians 4. Transit 5. Accommodations for recreational cyclists and hikers	Exurban Residential; Agriculture and Rural Residential; Open Space/Recreation	Old San Jose Road (Santa Cruz); Sunset Drive, Pacific Grove; San Andreas Rd, La Selva Beach; Carmel Valley Rd, Monterey County;

USER NEEDS

New roads and road improvements should be designed to provide safe and convenient routes for all applicable users and purposes including, but not limited to:



Pedestrians (all ages and abilities)



Bicyclists (all ages and abilities)



Transit (riders and operators)



Motorists



Commercial/agricultural large vehicle drivers



Commuters



Tourists



Active/recreational users



Emergency responders

Each user group has different needs and group-specific priorities for any given roadway. These needs and priorities should be considered when designing or rehabilitating a roadway in order to accommodate all users. Table 3 illustrates the needs specific to each user group and examples of design solutions. One of the greatest challenges of planning for and designing complete streets is balancing the often conflicting needs of different roadway users in a limited space. For example, motorists generally want uninterrupted quick travel, wide lanes and large turning radii whereas pedestrians prefer to travel along streets with low volumes of slow traffic, small turning radii and frequent crossings.

TABLE 3: ROADWAY USER NEEDS

USER GROUP	PROBLEMS ENCOUNTERED	DESIGN SOLUTIONS/APPLICATIONS
Pedestrians – Commuters/Residents	Crossing delayed, few crossings, little separation from moving vehicles, high traffic volumes, few access points to destination, inadequate ADA access, little/no shade or shelter, poorly-lit walkways and crossings, slippery surface materials, obstructed routes, inefficient drainage, indirect routes	Pedestrian signal actuation and adequate crossing time, traffic calming, continuous sidewalk network, short blocks, ample width, planting strip/on-street parking, ADA ramps, street trees and pedestrian-scale lighting appropriately designed storm drains
Pedestrians – Seniors, disabled and children	Small gaps in traffic, long crossing distances, few crossings, inadequate ADA access, shade or shelter, poorly-lit walkways and crossings, slippery surface materials, obstructed routes, inefficient drainage	Adequate crossing time at signalized intersections, curb extensions, high-contrast markings, two-stage actuated crossings, medians, audible countdown pedestrian phase (signalized) and ADA ramps, street trees, pedestrian-scale lighting
Pedestrians – Visitors/Tourists	Few/no pedestrian destinations, limited/no way-finding, unmarked crossings, narrow sidewalks, little/no shade or shelter, few/no pedestrian amenities, poorly-lit walkways and crossings	Pedestrian plaza, way-finding signage, high-contrast marked crossings, wide sidewalks, on-street parking, street trees, outdoor seating, public art, public toilets, pedestrian-scale lighting
Bicyclists – Intermediate to Advanced; Commuters	Little separation from motorized vehicles (moving and/or parked), indirect routes/limited access to job centers, shopping and major destinations, bicycle detection at few/no signalized intersections, insufficient short-term and long-term bicycle parking, few/no commuter facilities	On-road facilities (Class II lanes/Class III shared roadway), well-connected bikeway network, marked bicycle detection, bicycle racks and covered/indoor bicycle parking, public or employer-provided shower facilities,

TABLE 3: ROADWAY USER NEEDS

USER GROUP	PROBLEMS ENCOUNTERED	DESIGN SOLUTIONS/APPLICATIONS
Bicyclists – Novice; Children	Little separation from motor vehicle traffic, disjointed/incomplete bikeway network, narrow right-of-way, insufficient/no bicycle parking	Off-road facilities (Class I paths), complete bikeway network, bicycle racks, marked bike detection
Bicyclists – Recreational/Touring	Little separation from motorized vehicles, insufficient/no way-finding	Wide paved shoulders, way-finding signage and distance markers, bike racks
Transit – Riders	Limited access to and from transit stop, poorly-lit stop, poor visibility, no/insufficient transit route and schedule information, no/insufficient seating, no/insufficient shelter, no/small buffer from moving traffic	Marked pedestrian crossing, curb extensions, ADA ramps, pedestrian-scale lighting, transit shelter facing out to street, real-time traveler information, transit shelter/station
Transit - Operators	Limited space to operate transit vehicles, numerous conflicts, long delays	Large turning radius, wide travel lanes, generous merging distance, signal prioritization, street furniture setback from curb

Levels of Traffic Stress- Low Stress Users

Within each roadway user group are individuals with varying abilities and levels of experience. Ability and experience both factor into how comfortable an individual is travelling by a certain mode or on different types of transportation facilities. User ability, experience, comfort, and traffic stress tolerance should be taken into consideration with designing complete streets. Research focused on bicycling has shown that roadway users have varying levels of tolerance for traffic stress. For instance, adults who commute by bicycle to work are more likely to feel comfortable riding in a bike lane on a busy street next to fast moving motor vehicles than those who have less experience bike riding or are unfamiliar with the street network.



Traffic stress may include a combination of perceived danger and other stresses such as noise and exhaust fumes associated with motor traffic. Several recent research efforts, including those at the Mineta Transportation Institute, have classified streets according to the stress they impose on cyclists. Although some of the classifications for level of traffic stress vary, the general concepts are the same. Roads with the lowest level of traffic stress can be accepted by most children (who are less capable of negotiating traffic and more prone to irrational and sudden movements), and the highest level of stress is tolerated by advanced cyclists whose skill enables them to share road with motor traffic. In order to accommodate the majority of roadway users, complete street design should strive to create routes and features that support “low stress users”.

NEIGHBORHOOD SHARED STREETS

Neighborhood shared streets, or “greenways”, can be an important characteristic of the complete street network. Neighborhood shared streets are located on local streets and emphasize slow speeds and lower volumes. To achieve lower speeds and volumes, neighborhood shared streets employ some or all of the following features:

- Traffic calming features to slow vehicle speeds
- Pavement markings that signal drivers and bicyclists to share the road and show where pedestrians should cross
- Bicycle and pedestrian scale way finding signs to provide information about nearby amenities, such as business districts and parks
- Partial street closures that limit the number of vehicles on the
- Public spaces and amenities to encourage pedestrian and bicycle activity.

A list of Quality Criteria (Appendix G) for greenways has been developed by the City of Seattle and is included in this packet for use by project sponsors to evaluate greenway designs and locations and to facilitate public dialogue about greenways.

Neighborhood shared streets may be a helpful tool for developing “low stress” routes for bicyclists and pedestrians in the Monterey Bay Area. Neighborhood shared streets are often less costly than dedicated bicycle and pedestrian facilities, which also serve “low stress” users. Like other types of complete street type investments, impacts of neighborhood shared streets, particularly the potential for diverting traffic to nearby neighborhood streets, should be evaluated as part of the discussion about tradeoffs. See the discussion regarding low stress users under Levels of Traffic Stress-Low Stress Users earlier in this chapter.

Chapter 5: Complete Streets Design

PURPOSE

The Monterey Bay Area Complete Street Guidebook provides examples of various street features to be considered when designing complete street facilities, so that they are utilized in the appropriate places. Complete street design should adhere to design principles and consider critical factors affecting design. The design features herein are organized by complete street type (i.e. Main Streets, Avenues, Local Streets, etc...) and by user zones (i.e. pedestrian, bicycle, street furniture, parking, etc...). Much of the content of this chapter has been adapted or borrowed from the Los Angeles County Model Design Manual for Living Streets.

EXCEPTIONS

The design elements and engineering best practices described in this chapter may not be appropriate for use in all jurisdictions. Local policy must be adhered to and engineering judgment applied; for example, the City of Monterey restricts the use of speed bumps/humps and uses other methods and measures to calm traffic.



DESIGN PRINCIPLES

Design for all users

Street design should accommodate all users of the street, including pedestrians, bicyclists, transit users, automobiles, and commercial vehicles. A well-designed traveled way provides appropriate space for all street users to coexist.



Design with the network in mind

Streets should be well connected and provide access to land uses for a diverse group of users.



Design intuitively

Street design should be intuitive for the users and require minimal signage and markings.



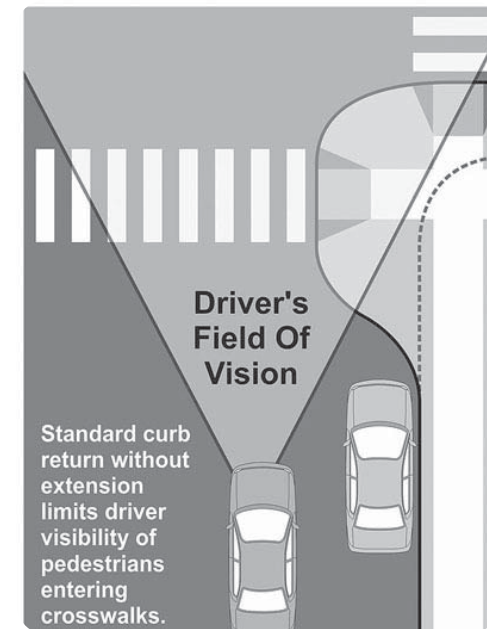
Design using the appropriate speed for the surrounding context

The right design speed should respect the desired role and purpose of the street, including the type and intensity of land use, urban form, the desired activities on the sidewalk, such as outdoor dining, and the overall safety and comfort of pedestrians and bicyclists. The speed of vehicles impacts all users of the street and the livability of the surrounding area. Lower speeds reduce crashes and injuries.



Design for safety

The safety of all street users, especially the most vulnerable users (children, the elderly, and disabled) and modes (pedestrians and bicyclists) should be paramount in any design of the traveled way. The safety of streets can be dramatically improved through appropriate geometric design and operations.



FACTORS AFFECTING DESIGN

Design To Accommodate All Users

Providing safe and convenient routes for all users is a core goal of complete street design. Therefore, it is important to identify and consider the needs of all potential roadway users. Since most modern roadways have been designed for motorists, complete streets design often puts more emphasis on other users such as pedestrians, bicyclists and transit.

Everyone is a pedestrian at some point every day, even if they drive, take the bus or ride a bicycle for the bulk of their trip. Areas that draw pedestrians such as downtowns generate activities that support the community and contribute to a higher quality of life. A recent survey of Monterey Bay Area residents concluded that more people would like to walk and to have nicer pedestrian facilities in their community. Despite some efforts to improved facilities, much more can be done to improve pedestrian conditions.

Studies have shown that most pedestrian crashes occur when a person crosses the road, and the most common crash type is a conflict between a crossing pedestrian and a turning vehicle at an intersection. Vehicle speed is directly related to the severity of injuries in collisions involving pedestrians. The severity of pedestrian injuries and risk of death in a collision with a motorized vehicle dramatically increases as the impact speed increases above 25 miles per hour (see Figure 5-1). Traffic calming can significantly improve pedestrian safety by slowing motor vehicles, especially in areas where there are high rates of pedestrian crossings.

Although incredibly important, pedestrian facility design should not be solely focused on improving safety, but should also consider factors that improve comfort and walking for pleasure. The two most effective methods to achieve these goals are to minimize the footprint dedicated to motor vehicle traffic and to slow down the speed of moving traffic. This approach allows the designer to use features that enhance the walking environment, such as trees, curb extensions, and street furniture, which in turn slow traffic, resulting in a virtuous cycle. All streets should have sidewalks except for rural roads and shared-space streets.

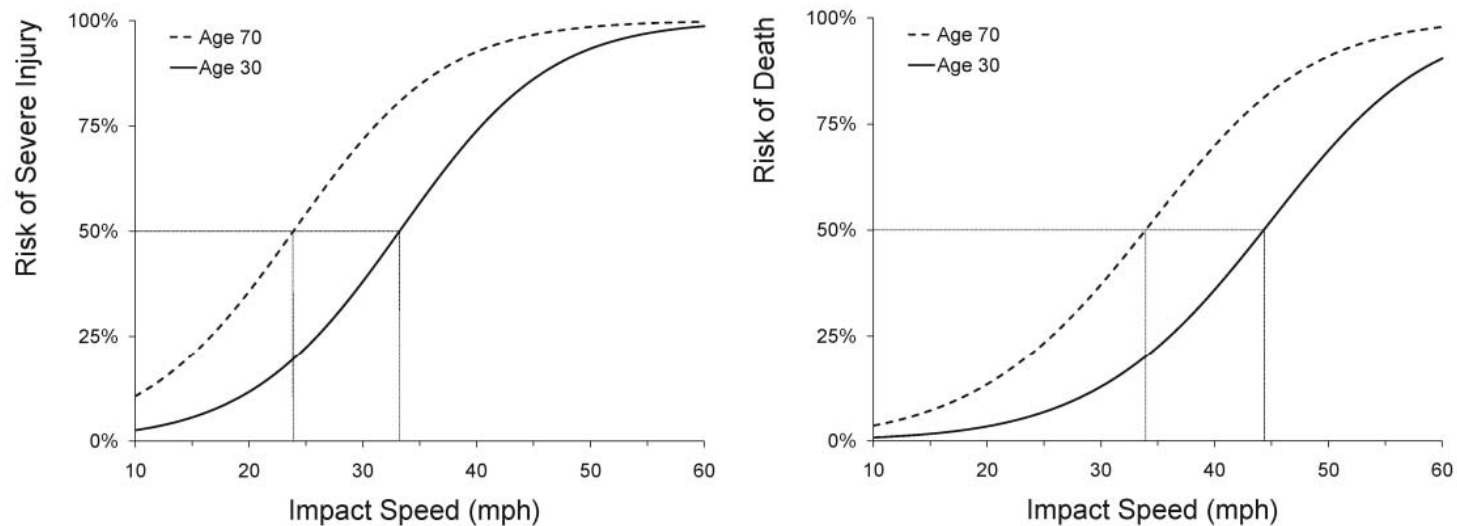


Figure 2: Risk of Pedestrian Injury or Death vs. Vehicle Impact Speed (AAA Foundation for Traffic Safety, 2011)

Accommodating all users also requires considering different needs within each user group. For instance, conditions arise in sidewalk networks that may create trip and fall hazards. Although these conditions, such as broken and raised pavement, slopes, vegetation intruding into the walkway, vehicles obstructing sidewalks, and signs, poles, stands or benches that obstruct or narrow the path are a danger for all pedestrians, the elderly, and others with impairments that affect vision and balance, are more susceptible to such hazards. In recognition of the negative impacts poor sidewalk conditions can have on elderly and disabled individuals in particular, the Santa Cruz County Regional Transportation Commission Pedestrian Safety Work Group developed a Program Model for Sidewalk Network Maintenance.

Another example of differentiating between needs of users within each user group is the range of experience in bicycle users. Adults who commute by bicycle to work are more likely to feel comfortable riding in a bike lane on a street with higher vehicle volumes and speeds; whereas less experienced bike riders, including children, may feel more comfortable on a bike facility buffered from motor vehicles.

How Streets are Sized

The size and geometric design of a street (including lane width, corner radii, median nose design, and other intersection design details), is determined in large part by the design vehicle, or the typical vehicle considered for use on that particular roadway. Designing for a larger vehicle than necessary is undesirable, due to the potential negative impacts larger dimensions may have on pedestrian crossing distances and the speed of turning vehicles. On the other hand, designing for a vehicle that is too small can result in operational problems if larger vehicles frequently use the facility.

For design purposes, the wheel-base 40 feet (WB-40) is appropriate unless larger vehicles are more common. On bus routes and truck routes, designing for the bus or large WB-40 type truck may be appropriate, but only at intersections where these vehicles make turns. For example, for intersection geometry design features such as corner radii, different design vehicles should be used for each intersection or even each corner, rather than a one-size-fits-all approach, which results in larger radii than needed at most corners. The design vehicle should be accommodated without encroachment into opposing traffic lanes. It is generally acceptable to have encroachment onto multiple same-direction traffic lanes on the receiving roadway.

Furthermore, it may be inappropriate to design a facility by using a larger control vehicle, which uses the street infrequently, or infrequently makes turns at a specific location. An example would be a vehicle that makes no more than one delivery per day at a business. Depending on the turn frequency, under designing the control vehicle can make streets more appropriate for multimodal use by reducing lane and right-of-way widths, without having to encroach on sidewalks and ramps, while allowing larger vehicles to encroach on opposing traffic lanes or make multiple-point turns.

Design Speed

In contrast to the high-speed design approach, the goal for complete streets is to establish a roadway design speed that creates a safer and more comfortable environment for motorists, pedestrians, and bicyclists. The complete streets approach also increases access to adjacent land, thereby increasing its value, and therefore is more appropriate for the surrounding context. For most complete streets, design speeds of 20 to 35 mph are desirable. Alleys and narrow roadways intended to function as shared spaces may have design speeds as low as 10 mph.

Design speed does not determine nor predict exactly at what speed motorists will travel on a roadway segment. Rather, design speed determines which design features are allowable or mandated. Features associated with high-speed designs, such as large curb radii, straight and wide travel lanes, ample clear zones, and guardrails, degrade the walking experience and make it difficult to design complete streets. Ultimately, designing roads which encourage high speeds creates a vicious cycle. A slower design speed allows the use of features that enhance the walking environment, such as small curb radii, narrower sections, trees, on-street parking, curb extensions, and street furniture, which in turn slow traffic, creating a virtuous cycle.



A narrow roadway with sharrow markings encourages slower speeds and is more comfortable for bicyclists.



Parkways or expressways are designed for higher speeds which can also benefit transit and bicycle commuters if appropriate facilities are provided.

Access Management

A major challenge in street design is balancing the number of access points to a street with the need for multiple users to enter the facility. There are many benefits of well-connected street networks; on the other hand, most conflicts between users occur at intersections and driveways. The presence of many driveways in addition to the necessary intersections creates many conflicts between vehicles entering or leaving a street and bicyclists riding or pedestrians walking along the street. Particularly in commercial zones, new driveways should be minimized and old driveways should be eliminated or consolidated, and raised medians should be placed to limit left turns into and out of driveways.



Corner with many wide driveways
(Credit: Michele Weisbart)



Reconstructed corner with fewer,
narrower driveways (Credit: Michele
Weisbart)

COMPLETE STREET TYPES CROSS SECTIONS

Complete street type cross sections represent example roadway designs that take into consideration the convenience and comfort of all roadway users based on land use and transportation context. Complete street types cross sections should serve as a starting point when designing for complete streets and should not be interpreted as design requirements. Existing roadways undergoing improvements may not have sufficient right-of-way to accommodate all of the design features shown in the complete street cross sections.

The advantage of starting with a complete street type cross section when designing projects is that it provides project sponsors and stakeholders with a vision of a complete street, which prioritizes roadway user needs based on land use and transportation context, before moving into the discussion about constraints and trade-offs. In many cases the final project design will not replicate what is shown in the complete street type cross sections, but that the project design will maintain the balance of roadways user needs as illustrated in the cross sections using the resources, skills and techniques available.

For example, a rural roadway, which is primary designed for truck/agricultural vehicles and private automobiles, and where vehicle lanes cannot be reduced to provide exclusive bicycle or pedestrian facilities, utilizing sharrows to indicate bicycle use of traffic lane and/or providing a wide paved shoulder to allow pedestrian access may be considered when evaluating roadway designs.



User Zones

The complete street types identify the roadway characteristics by mode using “user zones” with the preferred dimensions of elements along the street. The complete street type cross sections go beyond street functional classification by considering bicyclists and pedestrians, not only automobile movement. The specific function of zones may vary by complete street type. However, generally the zones can be defined as follows:

Pedestrian zone: Includes unobstructed sidewalks with appropriate widths based on demands generated by adjacent land uses and pedestrian facilities, as appropriate.



Street Furniture zone: Includes pedestrian, bicycle and transit supportive amenities such as transit shelters, seating, lighting, bicycle parking, signage, kiosks and public art.

Green zones: Includes landscaping or hardscape amenity zones. Supports pedestrian zone by maintaining comfortable pedestrian travel by providing a buffer from motorized zone or by shortening pedestrian crossings through establishing an “island” in the roadway. Can also support traffic calming and neighborhood livability.





Parking zone: Includes parking to serve adjacent businesses. The parking zone also can serve to calm traffic and provide a buffer to the pedestrian zone. Parking zone may be utilized as intermittent transit and bicycle lanes often referred to as “business access and transit lane” (BAT) and/or floating bicycle lanes.

Motor vehicle zone: Includes a variety of possible lane configurations to accommodate desired motorized vehicle speed and volumes.



Bicycle zone (exclusive zone): Includes dedicated bicycle facilities on typically on higher speed and volume roadways and may include additional buffering from other modes. Bicycle treatments can be found in **Appendix K**.

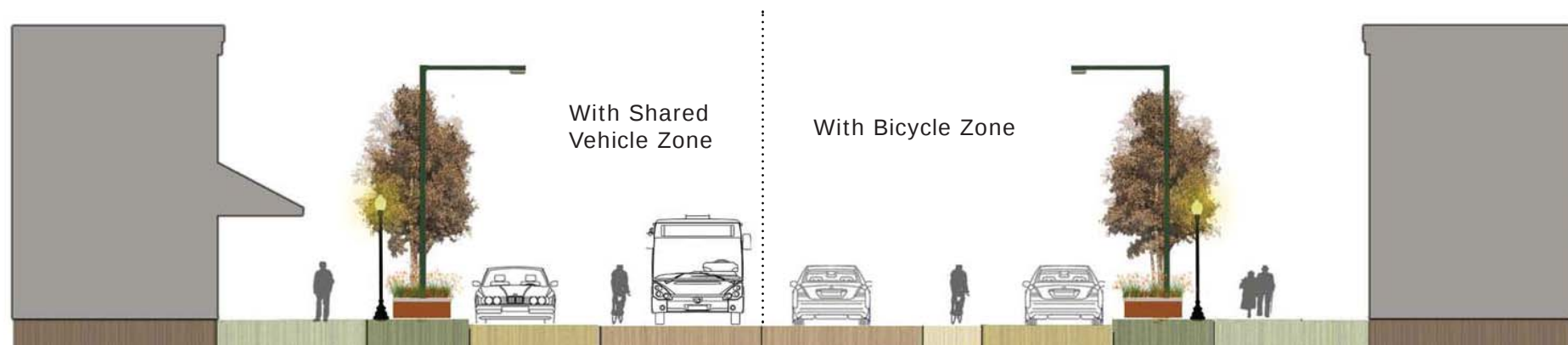
Bicycle zone (mixed vehicle zone): Includes shared facilities with motorists typically on low volume and speed roadways and pavement markings, where appropriate.



Emergency vehicle zone: No specific zone is exclusive to emergency vehicles. Together, motor vehicle and bicycle zones will be meet the California Fire Code that requires public streets to have an unobstructed travel way of at least 20 feet, unless an exception is made.

Main Street Zones

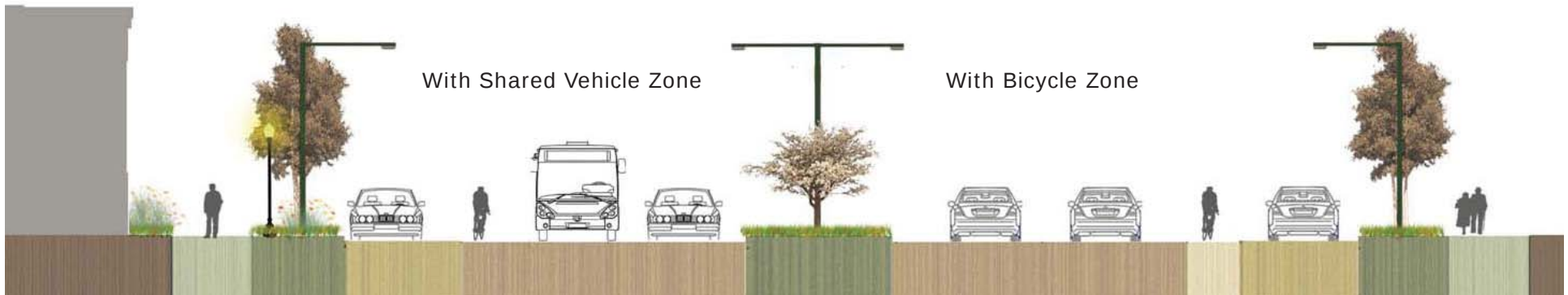
- **Design Speed** – Less than 30 miles per hour
- **User Prioritization**– Pedestrians & Bicyclists
- **Land Use Place Types** - Urban Commercial; Urban Mixed-Use; Town Commercial; Town Mixed-Use; Rural-Town Commercial; Institutional



Pedestrian	Street Furniture	Green	Motor Vehicle	Bicycle	Parking
Main Streets generate high levels of pedestrian traffic and pedestrians should be prioritized over other modes. The unobstructed pedestrian zone should be at least 10' wide and extend to the building frontage.	Pedestrian amenities such as seating, lighting, wayfinding signage, public art, kiosks, and bicycle racks near store entrances are encouraged	Street trees add character to the street and provide shade and shelter from the rain. Trees with deep roots should be selected over those with shallow roots to avoid uplifted sidewalk which can become a tripping hazard	Travel lanes should be 13' if shared with bicyclists; otherwise travel lanes should be narrowed to 10' to provide space for 6' bicycle lanes. Images for each zone	Shared bicycle facilities are appropriate due to low vehicle speeds. Markings ("sharrows") that position bicyclists away from the "door zone" of parked vehicles are recommended as they reduce the risk of injury to bicyclists.	On-street parking is encouraged and acts as a buffer between pedestrians and the motor vehicle zone. Parallel parking is preferred, however angled parking is acceptable. Parking meters should be placed as to not block access to the pedestrian zone.

Avenues

- **Design Speed** – 25-35 miles per hour
- **User Prioritization** – Bicycles, Pedestrians & Transit
- **Land Use Place Types** - Urban Multi-Family Residential; Multi-Family Residential; Neighborhood Commercial; Town Multi-Family Residential; Town Mixed-Use; Institutional; Open Space/Recreation
- **Local Examples:** Sloat Avenue (Monterey); Branciforte Avenue (Santa Cruz)



Pedestrian	Street Furniture	Green	Motor Vehicle	Bicycle	Parking
Avenues serve a variety of land uses and thus generate medium to high levels of pedestrian activity. The unobstructed pedestrian zone should be at least 6' wide but 8' or 10' is preferred.	Amenities such as transit shelters, seating, pedestrian-scale lighting, wayfinding signage, public art, kiosks, and bicycle racks near store entrances are encouraged.	Permeable hardscaping, landscaping and street trees are desired. The green zone should be a minimum of 8' to provide adequate buffer between pedestrians and motorists.	Travel lanes should be 13' if shared with bicyclists; otherwise travel lanes should be narrowed to 10' to provide space for 6' bicycle lanes. Images for each zone	Shared bicycle facilities are appropriate on streets with low vehicle speeds 6' bike lanes are recommended on streets with a posted speed of 30 mph or more. The gutter pan is not considered part of the lane width or bicycle lane width.	On-street parking may be provided. One benefit to parking is that it acts as a buffer between pedestrians and the motor vehicle zone. However, on streets with limited right-of-way there may not be room for both parking and a dedicated bike lane.

Boulevards

- **Design Speed** – 30-40 miles per hour
- **User Prioritization** – Transit, Autos/Trucks & Bicycles
- **Land Use Place Types** - Multi-Family Residential; Neighborhood Commercial; Regional Commercial; Employment Center; Neighborhood Mixed-Use; Institutional; Open Space/Recreation
- **Local Examples:** Munras Avenue (Monterey); Capitola Road (Live Oak/Capitola)



Pedestrian	Street Furniture	Green	Motor Vehicle	Bicycle	Parking
The unobstructed pedestrian zone should be at least 6' wide but 8' or 10' is preferred. The pedestrian zone should also be set back from the street, to mitigate discomfort generated from greater volumes of fast-moving vehicles.	Amenities such as transit shelters, seating, pedestrian-scale lighting, wayfinding signage, public art, kiosks, and bicycle racks near store entrances are encouraged	The green zone should be a minimum of 8' to provide adequate buffer between pedestrians and motorists. Medians should be landscaped and permeable but remain accessible to pedestrians.	The outside travel lanes should be 14' if shared with bicyclists; otherwise travel lanes should be 11'-12'. Boulevards should not have continuous left-turn lanes but instead be separated by a median wherever feasible. Medians should be a minimum of 8' wide.	6' bike lanes are recommended. The gutter pan is not considered part of the bicycle lane width.	On-street parking is not required but allowed where appropriate. Off-street parking is desired.

Parkways

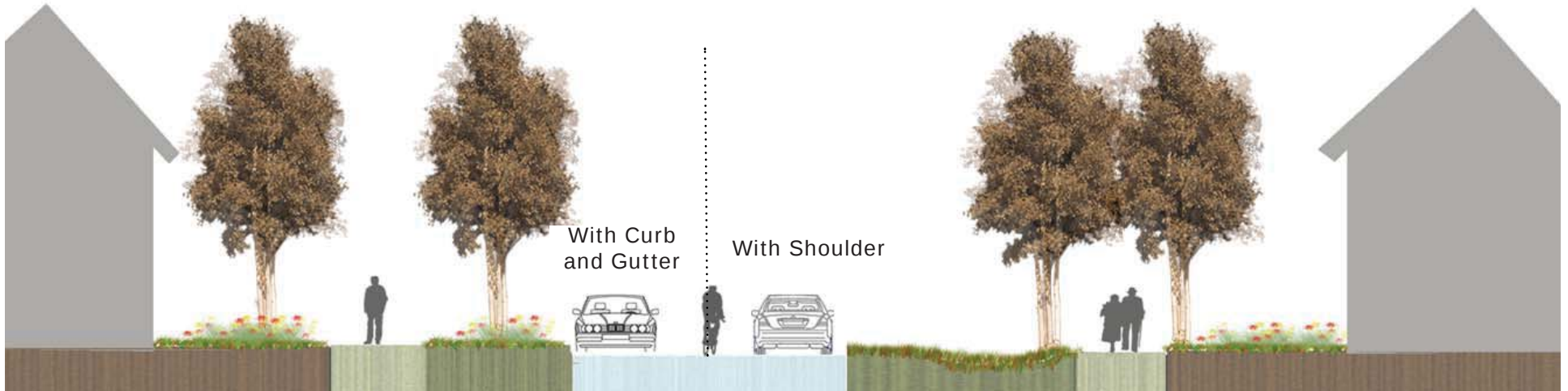
- **Design Speed** – 35-45 miles per hour
- **User Prioritization** – Auto/Trucks, Transit & Bicycles
- **Land Use Place Types** - Regional Commercial; Employment Center; Airport; Institutional; Open Space/Recreation
- **Local Examples** - Imjin Parkway/Rd (Marina); Soquel Drive (Aptos); Canyon Del Rey (Del Rey Oaks)



Pedestrian	Street Furniture	Green	Motor Vehicle	Bicycle	Parking
Preferred accommodation for pedestrians is a multi-use path set back from the street.	Amenities such as transit shelters, seating, pedestrian-scale lighting, wayfinding signage, public art, and kiosks are desirable. Transit stops should connect to the sidewalk and/or multi-use trail.	The green zone should be a minimum of 20' to accommodate the "clear zone" and to provide adequate buffer between pedestrians and motorists. Medians should be landscaped and permeable but remain accessible to pedestrians.	Travel lanes should be 11'-12' wide. Parkway should not have continuous left-turn lanes but instead be separated by a median wherever feasible. Medians should be a minimum of 17' wide. Shoulders are allowable on an urban parkway if appropriate.	Preferred accommodation for bicyclists is a multi-use path set back from the street. 6' bike lanes are also appropriate and may better serve experienced bicyclists. The gutter pan is not considered part of the bicycle lane width.	On-street parking should not be permitted along parkways. Instead park and ride lots served by transit should be provided.

Local Streets

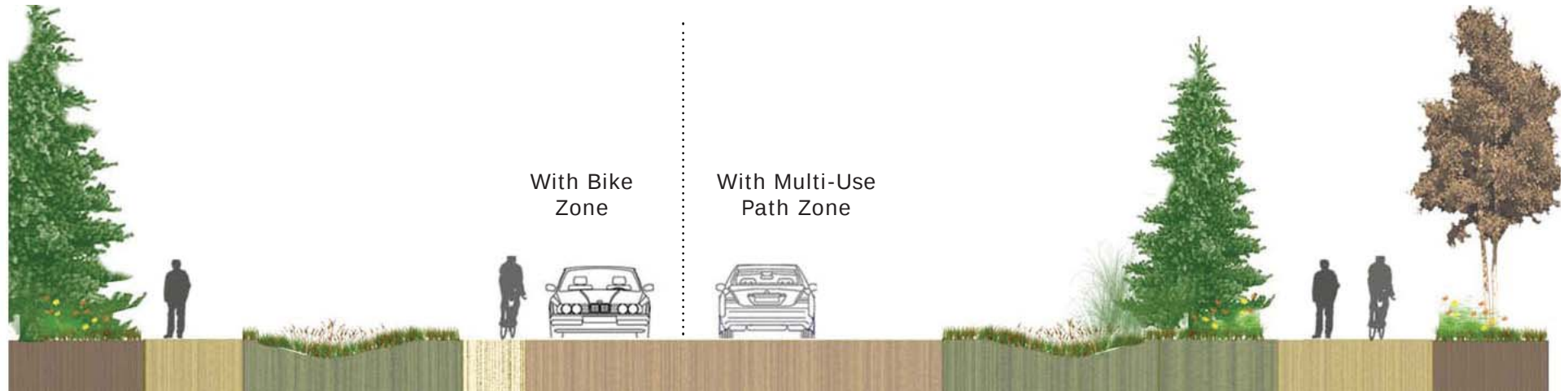
- **Design Speed** – < 25 miles per hour
- **User Prioritization** – Pedestrians, Bicycles & Autos/Trucks
- **Land Use Place Types** - Urban Single-Family Residential; Urban Multi-Family Residential; Urban Mixed-Use; Single-Family Residential; Multi-Family Residential; Town Single-Family Residential; Town Multi-Family Residential; Rural Town Residential; Institutional; Open Space/Recreation



Pedestrian	Street Furniture	Green	Motor Vehicle	Bicycle	Parking
Unobstructed pedestrian zone should be a minimum of 5' with a vertical curb (rolled curbs allow parked cars to encroach in the pedestrian area). Streets with very low traffic volumes may not require sidewalks and instead function as a shared street or "Woonerf".	Pedestrian-scale lighting and some bicycle/pedestrian wayfinding signage for destinations such as community centers, parks and schools	The green zone should be a minimum of 4' to accommodate landscaping/trees. Bioswales and raingardens may also be appropriate in the green zone.	Travel lanes should be a minimum of 9'-10' with a 4' shoulder. Medians are not typically provided on local streets with the exception of partial medians which can be used for traffic calming and aesthetic purposes	Shared bicycle facilities are appropriate due to low vehicle speeds and traffic volumes. Neighborhood shared streets should have additional amenities such as bicycle boulevard signage, sharrows, partial street closures and traffic calming features.	Parallel on-street parking is recommended along local streets. The parking serves as a buffer between pedestrians and motorists.

Rural Roads

- **Design Speed** – Varies
- **User Prioritization** – Autos/Trucks, Transit & Bicycles
- **Land Use Place Types** – Agriculture and Rural Residential; Exurban Residential; Industrial and Manufacturing; Open Space/Recreation
- **Local Examples** – Corralitos Road (Santa Cruz)



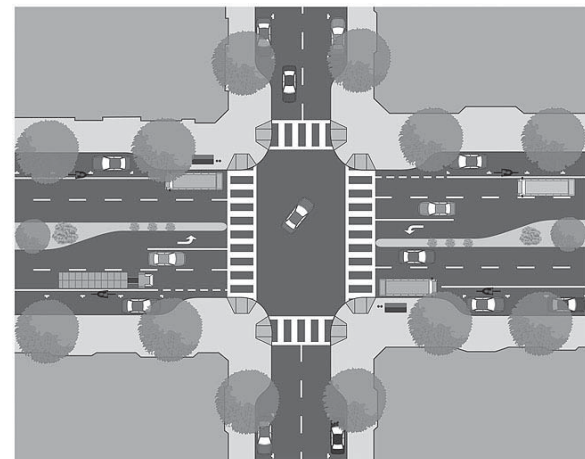
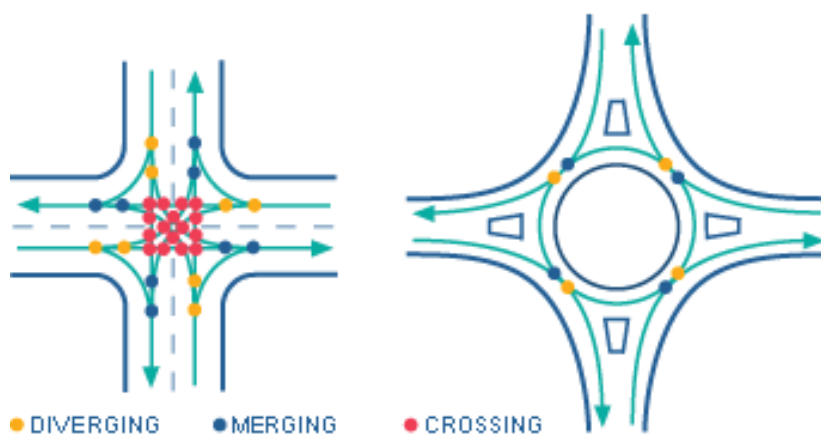
Pedestrian	Street Furniture	Green	Motor Vehicle	Bicycle	Parking
A wide paved roadway shoulder can accommodate both pedestrians and bicyclists in a rural setting. A sidewalk or multi-use path outside of the clear zone may also be appropriate (especially if it provides access to a community resource such as a school).	Pedestrian-scale lighting, amenities at transit stops and some bicycle/pedestrian wayfinding signage for destinations such as community centers, parks and schools near rural town centers.	The green zone consists of the roadway shoulder and ditch. This area may be paved at intersections to reduce the amount of dirt, mud and debris carried onto the roadway by agricultural vehicles.	A wide paved roadway shoulder can accommodate bicyclists. Multi-use paths outside of the clear zone may also be appropriate.	Travel lanes should be a minimum of 10'-12' with a 6'-8' shoulder.	On-street parking is not recommended on rural roads.

INTERSECTIONS

Principles

The following principles apply to all users of intersections:

- Good intersection designs are compact.
- Unusual conflicts should be avoided.
- Simple right-angle intersections are best for all users since many intersection problems are worsened at skewed and multi-legged intersections.
- Roundabouts reduce points of conflict and severity of potential collisions compared to signalized or stop controlled intersections.
- Access management practices should be used to remove additional vehicular conflict points near the intersection.
- Signal timing should consider the safety and convenience of all users and should not hinder bicycle or foot traffic with overly long waits or insufficient crossing times.



Signalized Intersections

To improve livability and pedestrian safety, signalized intersections should:

- Provide signal progression at speeds that support the target speed of a corridor whenever feasible.
- Provide short signal cycle lengths, which allow frequent opportunities to cross major roadways, improving the usability and livability of the surrounding area for all modes.
- Ensure that signals detect bicycles.
- Place pedestrian signal heads in locations where they are visible.
- At locations with many crossing pedestrians, time the pedestrian phase to be on automatic recall, so pedestrians do not have to seek and push a pushbutton.
- Where few pedestrians are expected and automatic recall of walk signals is not desirable, place pedestrian push buttons in convenient locations, using separate pedestals if necessary. Use the recommendations regarding push button placement for accessible pedestrian signals found in the Manual on Uniform Traffic Control Devices (MUTCD).
- Include pedestrian signal phasing that increases safety and convenience for pedestrians.



Yield and Stop-Controlled Intersections

Most intersections are either stop-controlled or yield-controlled. In general, stop signs are overused and often mistakenly used for traffic calming. Stop signs are not a traffic calming device. An intersection must meet warrants set forth in the Manual of Uniform Traffic Control Devices (MUTCD) before stop controls may be installed.

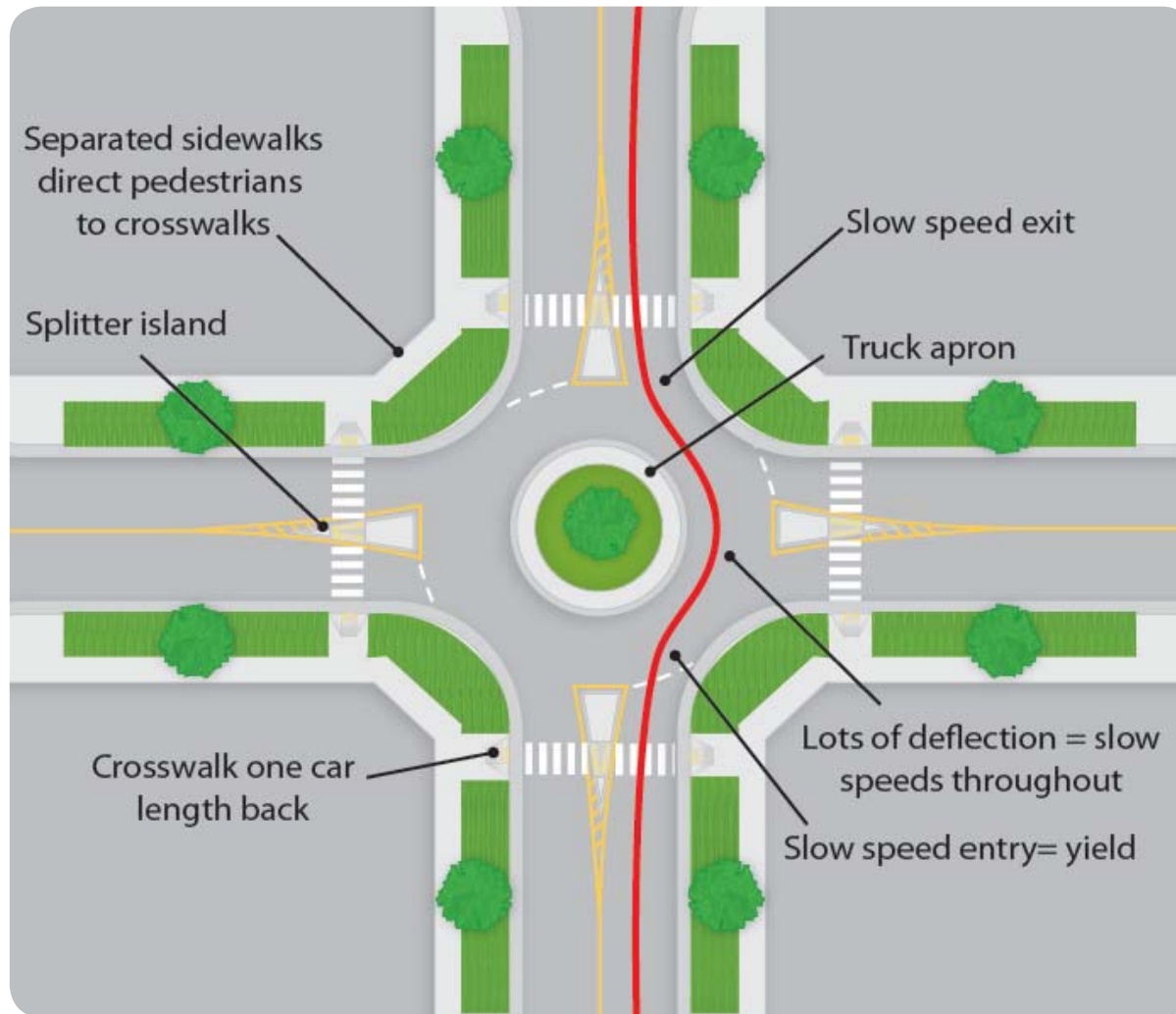
Intersection control options include the following:

- Yield control, which is under-utilized and should be considered to reduce unnecessary stops caused by the overuse of stop signs.
- Uncontrolled intersections are yield controlled by default.
- Two-way stop control, the most common form of intersection control. This is also an overused device. At many intersections a neighborhood traffic calming circle is a preferable and more effective option.
- All-way stops are often overused, incorrectly, to slow traffic. The use of all-way stops should be consistent with the MUTCD. At many intersections a neighborhood traffic calming circle is a preferable and a more effective option.



Roundabouts

Roundabouts reduce vehicle-to-vehicle and vehicle-to-pedestrian conflicts and, thanks to a substantial reduction in vehicle speeds, reduce all forms of crashes and crash severity. In particular, roundabouts eliminate the most dangerous and common crashes at signalized intersections: left-turn and right-angle crashes.



Other benefits of roundabouts include the following:

- Little to no delay for pedestrians, who have to cross only one direction of traffic at a time.
- Improved accessibility to intersections for bicyclists through reduced conflicts and vehicle speeds.
- A smaller carbon footprint. Less lighting is required for operation and fuel consumption is reduced as motor vehicles spend less time idling and don't have to accelerate as often from a dead stop.
- Opportunity to reduce the number of vehicle lanes between intersections. For example, a five-lane road may be reduced to a two-lane road due to increased vehicle capacity at intersections.
- Little to no stopping during periods of low flow.
- Significantly reduced maintenance and operational costs required by signals and lights
- Reduced delay, travel time, and vehicle queue lengths.
- Lowered noise levels.
- Less fuel consumption and air pollution.
- Simplified intersections.
- Facilitated U-turns.
- The ability to create a gateway and/or a transition between distinct areas through landscaping.
- Light rail can pass through the center of a roundabout without delay because rail has the right of way, although gates may be required

The primary disadvantage of a roundabout is that sight-impaired people can have difficulty navigating around large roundabouts. However, this difficulty can be mitigated with ground level wayfinding devices.

Before starting the design of a roundabout it is very important to determine the following:

- The number and type of lane(s) on each approach and departure as determined by a capacity analysis.
- The design vehicle for each movement.
- The presence of on-street bike lanes.
- The goal/reason for the roundabout, such as crash reduction, capacity improvement, speed control, or creation of a gateway or a focal point.
- Right-of-way and its availability for acquisition if needed.
- The existence or lack of sidewalks.
- The approach grade of each approach.
- Transit, existing or proposed.

UNIVERSAL PEDESTRIAN ACCESS

The following design principles inform the recommendations made in this chapter and should be incorporated into every pedestrian improvement:

- The walking environment should be safe, inviting, and accessible to people of all ages and physical abilities.
- The walking environment should be easy to use and understand.
- The walking environment should seamlessly connect people to places. It should be continuous, with complete sidewalks, well-designed curb ramps, and well-designed street crossings
- The walking environment should not be obstructed.

Legal Framework

Under Title II of the Americans with Disabilities Act (ADA) of 1990, state and local governments and public transit authorities must ensure that all of their programs, services, and activities are accessible to and usable by individuals with disabilities. They must ensure that new construction and altered facilities are designed and constructed to be accessible to persons with disabilities. State and local governments must also keep the accessible features of facilities in operable working condition through maintenance measures including sidewalk repair, landscape trimming, work zone accessibility, and snow removal.

Under the ADA, the U.S. Access Board is responsible for developing the minimum accessibility guidelines needed to measure compliance with ADA obligations when new construction and alterations projects are planned and engineered. These guidelines for public rights-of-way are found in form in the Public Rights-of-Way Accessibility Guidelines. The U.S. Department of Transportation has recognized this document as current best practices in pedestrian design and has indicated its intent to adopt the final guidelines.

In addition, Title II of the ADA also requires states and localities to develop ADA Transition Plans that remove barriers to disabled travel.

ADA Transition Plans are intended to ensure that existing inaccessible facilities are not neglected indefinitely and that the community has a detailed plan in place to provide a continuous pedestrian environment for all residents.

These plans must:

- Inventory physical obstacles and their location.
- Provide adequate opportunity for residents with disabilities to provide input into the Transition Plan.
- Describe in detail the methods the entity will use to make the facilities accessible.
- Provide a yearly schedule for making modifications.
- Name an official/position responsible for implementing the Transition Plan.
- Set aside a budget to implement the Transition Plan.



Obstructions can make passage difficult or impossible for wheelchair users. (Credit: Michael Ronkin)

User Needs

Wheelchair and scooter users are most affected by the following:

- Uneven surfaces that hinder movement.
- Rough surfaces that make rolling difficult and can cause pain, especially for people with back injuries.
- Steep uphill slopes that slow the user.
- Steep downhill slopes that cause a loss of control.
- Cross slopes that make the assistive device unstable.
- Narrow sidewalks that impede the ability of users to turn or to cross paths with others.
- Devices that are hard to reach, such as push buttons for walk signals and doors.
- The lack of time to cross the street.



Walking-aid users are most affected by the following:

- Steep uphill slopes that make movement slow or impossible.
- Steep downhill slopes that are difficult to negotiate.
- Cross slopes that cause the walker to lose stability.
- Uneven surfaces that cause these users to trip or lose balance.
- Long distances.
- Situations that require fast reaction time.
- The lack of time to cross the street.



Prosthesis users often move slowly and have difficulty with steep grades or cross slopes.

People with visual impairments include those who are partially or fully blind, as well as those who are colorblind. Visually impaired people face the following difficulties:

- Limited or no visual perception of the path ahead.
- Limited or no visual information about their surroundings, especially in a new place.
- Changing environments where they rely on memory
- Lack of non-visual information
- Inability to react quickly
- Unpredictable situations, such as complex intersections that are not at 90 degrees
- Inability to distinguish the edge of the sidewalk from the street
- Compromised ability to detect the proper time to cross a street
- Compromised ability to cross a street along the correct path
- Need for more time to cross the street



People with cognitive impairments encounter difficulties in thinking, learning, and responding, and in performing coordinated motor skills. Cognitive disabilities can cause some to become lost or have difficulty finding their way. They may also not understand standard street signs and traffic signals. Some may not be able to read and benefit from signs with symbols and colors.

Children and many older adults don't fall under specific categories for disabilities, but must be taken into account in pedestrian planning. Children are less mentally and physically developed than adults and have the following characteristics:

- Less peripheral vision.
- Limited ability to judge speed and distance.
- Difficulty locating sounds.
- Limited or no reading ability, so do not understand text signs.
- Occasional impulsive or unpredictable behavior.
- Little familiarity with traffic.
- Difficulty carrying packages.



The natural aging process generally results in at least some decline in sensory and physical capability. As a result, many older adults experience the following:

- Declining vision, especially at night.
- Decreased ability to hear sounds and detect where they come from.
- Less strength to walk up hills and less endurance overall.
- Reduced balance, especially on uneven or sloped sidewalks.
- Slowed reaction times to dangerous situations.
- Slowed walking speed.

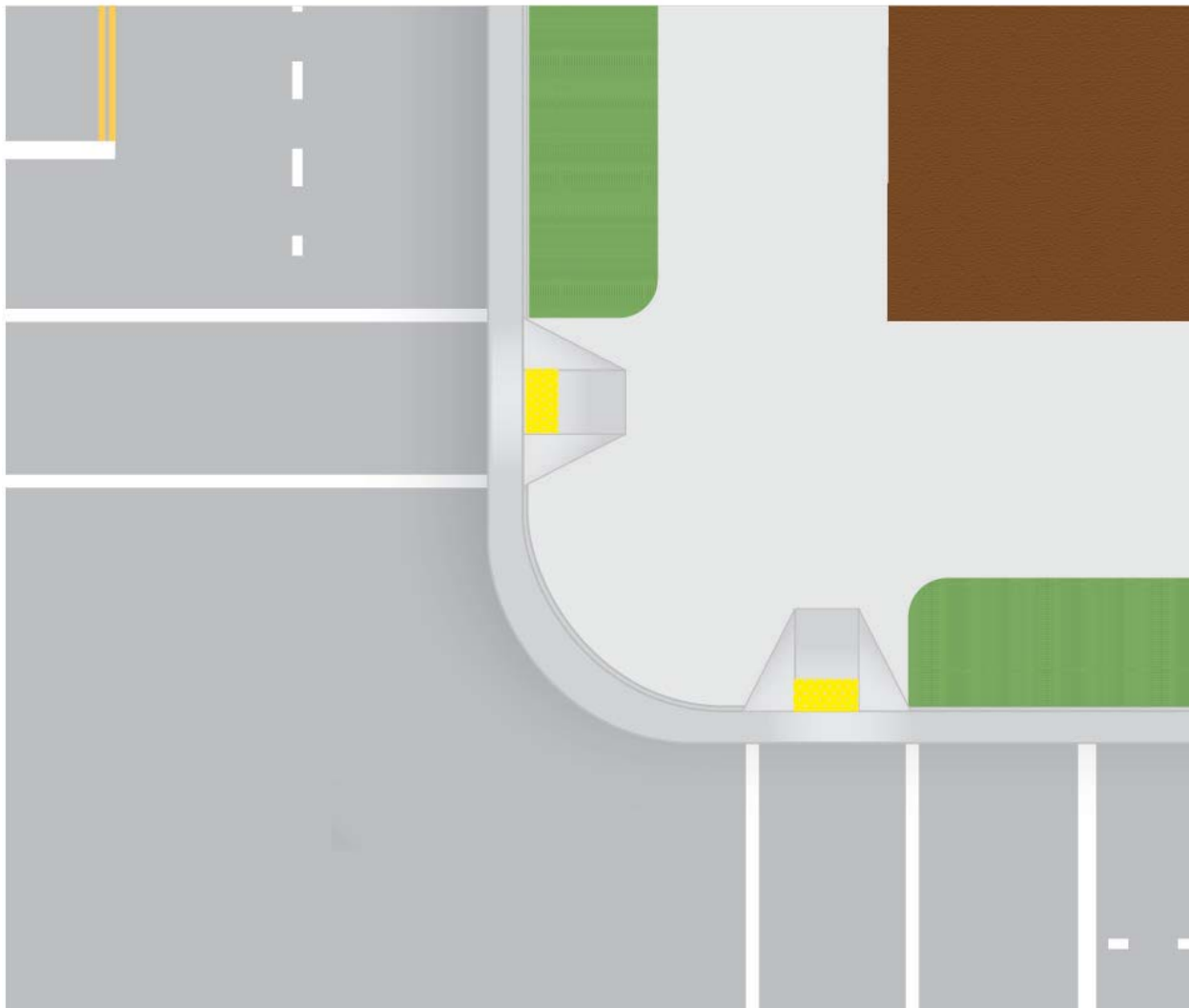


Accessible Pedestrian Facility Best Practices

Crosswalks and ramps at intersections should be placed so they provide convenience and safety for pedestrians. The following recommended practices will help achieve these goals:

- Allow crossings on all legs of an intersection, unless there are no pedestrian accessible destinations on one or more of the corners. Closing a crosswalk usually results in a pedestrian either walking around several legs of the intersection, exposing them to more conflicts, or crossing at the closed location, with no clear path or signal indication as to when to cross.
- Provide marked crosswalks at signalized intersections.
- Place crosswalks as close as possible to the desire line of pedestrians, which is generally in line with the approaching sidewalks.
- Provide as short as possible a crossing distance to reduce the time that pedestrians are exposed to motor vehicles. This is usually as close as possible to right angles across the roadway, except for skewed intersections.
- Ensure that there are adequate sight lines between pedestrians and motorists. This typically means that the crosswalks should not be placed too far back from the intersection.
- When a raised median is present, extend the nose of the median past the crosswalk with a cut-through for pedestrians.
- Provide one ramp per crosswalk, or two per corner for standard intersections with no closed crosswalks. Ramps must be entirely contained within a crosswalk. The crosswalk can be flared to capture a ramp that cannot be easily relocated. Align the ramp run with the crosswalk when possible, as ramps that are angled away from the crosswalk may lead some users into the intersection.

At intersections where roads are skewed or where larger radii are necessary for trucks, it can be difficult to determine the best location for crosswalks and sidewalk ramps. In these situations, it is important to balance the recommended practices above. Tighter curb radii make implementing these recommendations easier.



One curb ramp per crosswalk should be provided at corners. Ramps should align with sidewalks and crosswalks. (Credit: Michele Weisbart)

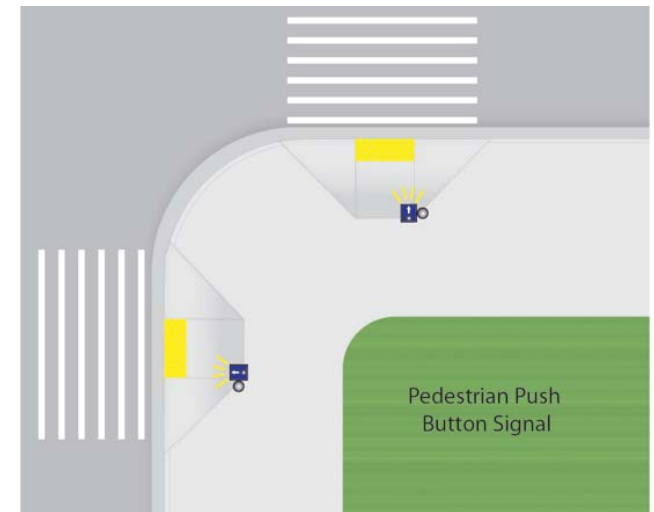
Crossing Times

In planning for people with disabilities, slower speeds must be considered. This is critical in setting the timing of the walk phase of signalized intersections. The Manual on Uniform Traffic Control Devices requires that transportation agencies use an assumed walking speed of 3.5 feet/second for signal timing. In situations where a large number of older adults or persons with disabilities cross, this may be inadequate to meet their needs. Some cities instead use 2.8 feet/second.

Cities may also use Pedestrian-User-Friendly-Intelligent traffic signals to ensure that all pedestrians have adequate time to cross. Pedestrian-User-Friendly-Intelligent crossings use infrared monitors to detect the presence of pedestrians in the crosswalk, and will hold the signal red for cross traffic until the pedestrian has left the crosswalk. Pedestrian-User-Friendly-Intelligent crossings help slower pedestrians, but also help the flow of traffic because they allow the normal pedestrian design speed to be set at a higher level.

Pedestrian-Activated Push Buttons

Pedestrian-activated traffic controls require pedestrians to push a button to activate a walk signal. As noted in Chapter 7, “Pedestrian Crossings,” pedestrian-activated signals are generally discouraged. The walk signal should automatically come on except under circumstances described in that chapter. Where pedestrian-activated traffic controls exist, they should be located as close as possible to curb ramps without reducing the width of the path. The buttons should be at a level that is easily reached by people in wheelchairs near the top of the ramp. The U.S. Access Board guidelines recommend buttons raised above or flush with their housing and large enough for people with visual impairments to see them. The buttons should also be easy to push.

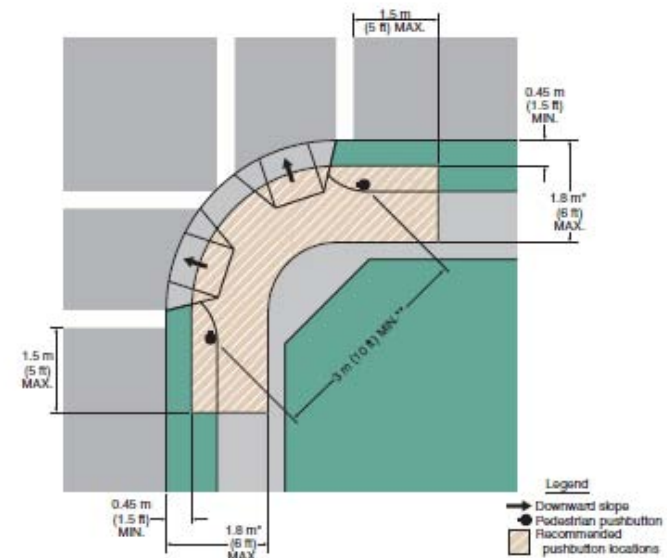


Pedestrian push button placement
(Credit: Michele Weisbart)

Accessible Pedestrian Signals

Wayfinding for pedestrians with visual impairments is significantly improved with the use of Accessible Pedestrian Signals at signalized intersections. In fact, Accessible Pedestrian Signals are the most commonly requested accommodation under Section 504 of the Rehabilitation Act of 1973. Accessible Pedestrian Signals communicate information about pedestrian timing in non-visual formats such as audible tones, verbal messages, and/or vibrating surfaces. Verbal messages provide the most informative guidance.

These devices should be installed close to the departure location and on the side away from the center of the intersection. Since they are typically only audible 6 to 12 feet from the push button, 10 feet should separate two devices on a corner. If two accessible pedestrian pushbuttons are placed less than 10 feet apart or on the same pole, each accessible pedestrian pushbutton shall be provided with a pushbutton locator tone, a tactile arrow, a speech walk message for the WALKING PERSON (symbolizing WALK) indication, and a speech push button information message. Volumes of the walk indication and push button locator tone shall automatically adjust in response to ambient sound.



Chapter 6: Six-Step Implementation Process

The purpose of this chapter is to explain how the perspectives of all stakeholders interested in or affected by existing or future streets can be incorporated into the review for planning and designing streets. The recommended process is summarized in Appendix H, Complete Street Project Review Checklist. This process was modeled after the work completed in the Charlotte Department of Transportation Urban Streets Design Guidelines, and San Francisco Bay Area, Routine Accommodation Checklist.

PROCESS FOR PLANNING AND DESIGNING COMPLETE STREETS

The six step process outlined below emphasizes coordinating city planning, urban design, and transportation planning activities by establishing a sequence of fact finding and decision-making steps. Applying this process to planning and designing streets is intended to support the creation of more streets which meet the needs of more people.

Six-Step Process

The process described below provides a great deal of flexibility to those involved in the decision-making process. This flexibility is intended to foster creative solutions by ensuring that land use planners, engineers, transportation planners, transportation system users, and others work together to think through the implications of alternative street designs. The six-step process will play an important role in addressing the significant challenge of retrofitting streets with limited right-of-way by means of completing a tradeoff analysis.

The six step processes below was vetted and carefully refined through a process lead by the Charlotte Department of Transportation in North Carolina. Since its adoption, the process has been credited was accomplishing complete streets goals and avoiding the need for costly redesign and preventing missed opportunities.

The following three assumptions are built into the six-step process:

- The process will involve a variety of stakeholders. The number of stakeholders and discussions will vary, depending on the magnitude of the project(s).
- The resulting street will be as “complete” as needed and possible, given the context of the facility.
- The complete streets evaluation will clearly document the major tradeoffs made among competing design elements, how those were discussed and weighed against each other, and the preliminary and final outcomes. Thorough documentation will ensure that all stakeholders’ perspectives are adequately considered in the final design.

Figure 6-1 shows the review steps to be included in applying the Monterey Bay Area Complete Street Guidebook. Each of the six steps is defined in more detail later in this chapter. The steps described below can be applied either to a single street or to a collection of streets in an area, such as when an area plan is being developed.

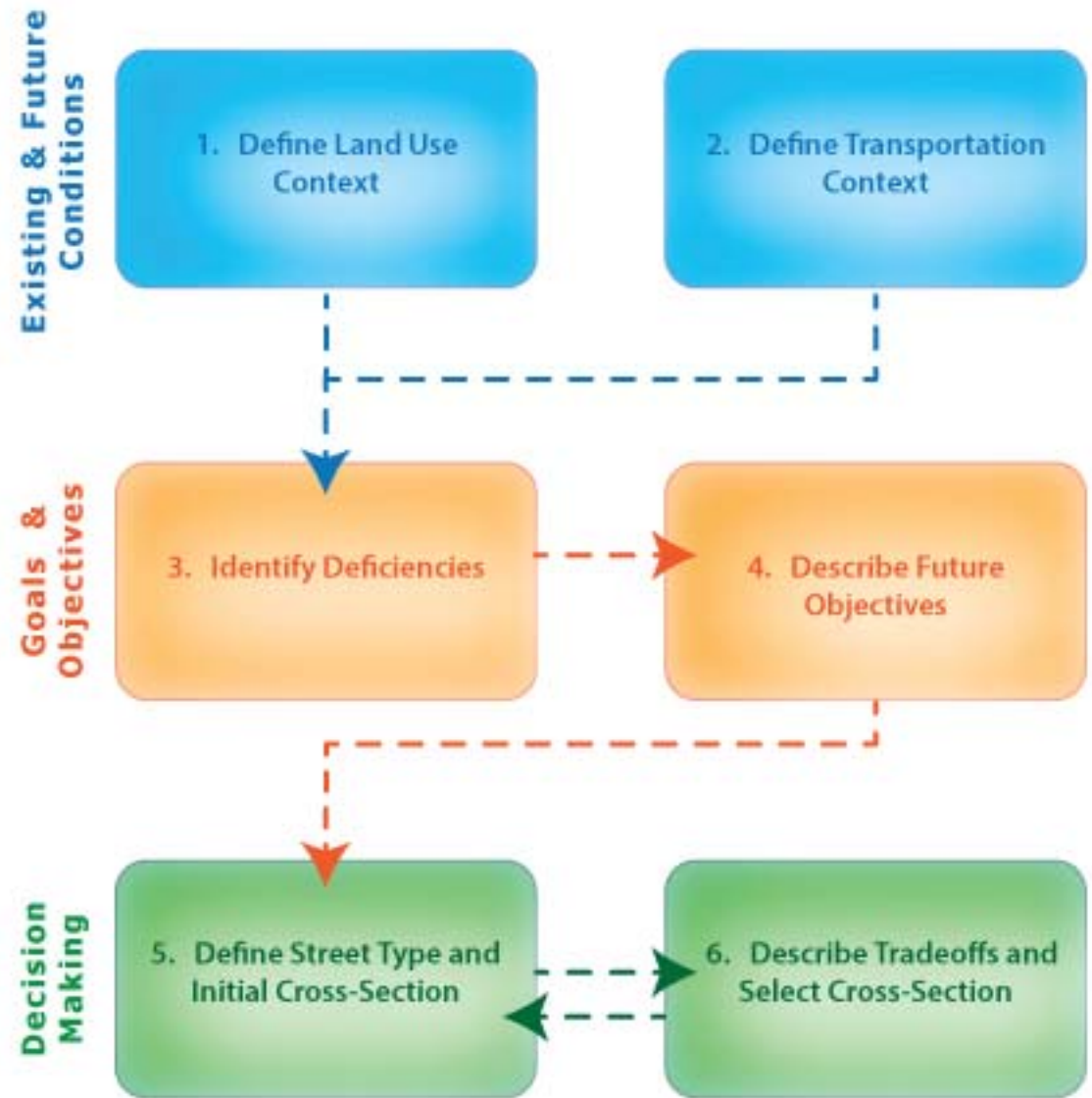


Figure 6-1 Six Step Process

Step 1: Define the Existing and Future Land Use and Urban Design Context

The classification and ultimate design of any street should reflect both the existing and expected future land use contexts. These contexts should be considered from the area wide level down to the immediately adjacent land uses. For example, a street is likely to be classified and/or designed differently if it is in an area slated for higher density development, such as a transit station area, versus in a neighborhood of single family houses, where very limited development changes are anticipated.

Step 2: Define the Existing and Future Transportation Context

The transportation assessment should consider the existing and expected future conditions of the transportation network adjacent to the street to be designed. The design should not be strictly related to capacity on a segment in isolation. Rather, the design should reflect the entire transportation context, including function, multimodal features, and form. The Complete Streets Project Review Checklist (Appendix H) should be used to assess and document existing and future conditions. Questions to facilitate dialogue and consideration of existing and future conditions are included in Appendix I.

Step 3: Identify Deficiencies

Once the existing and future land use and transportation contexts are clearly defined and understood at the area wide level, the design team should be able to identify and describe any potential deficiencies. This step should consider the relationship between different modes and the land use context. Use the Complete Streets Project Review Checklist (Appendix H) to identify and document deficiencies. Questions to facilitate dialogue and consideration of deficiencies are included in Appendix I.

Step 4: Describe Future Objectives

This step synthesizes the information from the previous steps into defined objectives for the street project. Objectives could be derived from the plans and/or policies for the area around the street, as well as from the list of deficiencies identified in step three. The objectives will form the basis for the future street classification and design. Sample questions that can be used to facilitate dialogue about potential issues can be found in Appendix I.

Step 5: Recommend Street Type and Initial Cross-Section and Constraints

The plan/design team recommends the appropriate complete street type(s), and cross-section design based on previous steps. The rationale behind the classification should be documented using the Complete Streets Project Review Checklist in Appendix H. Table 3 provides a reference for matching land use place types and street typologies and sample cross-sections. This step should also include a recommendation for any necessary adjustments to the land use plan/policy and/or transportation plan for that area. Since the street type and the design are influenced by the land use context, subsequent land use decisions should reflect and support the agreed-upon street type and design.

At this point, any constraints to the provision of the initial preferred cross-section should be clearly identified. These may include:

- Lack of right-of way,
- Existing structures,
- Existing trees or other environmental features,
- Topography, and
- Location and number of driveways.

Step 6: Describe Tradeoffs and Select Complete Street Type

Most likely the initial cross-section will need to be refined to better address the land use and transportation objectives, given the constraints identified in step five. If the technical team develops more than one alternative design, these multiple alternatives should be presented to the stakeholders, and made available to the public. Any refinements to the cross section should result from a thorough consideration of tradeoffs among competing uses of the existing or future public right-of way.

EXCEPTIONS

The Federal Highway Administration (FHWA) (2000) lists three exceptions to providing accommodations for bicycle and pedestrian travel on all streets. They follow the FHWA's guidance on accommodating bicycle and pedestrian travel and identified best practices frequently used in existing complete streets policies. Project sponsors may find it beneficial to consider these exceptions when evaluating trade-offs.

- Accommodation is not necessary on corridors where specific users are prohibited, such as interstate freeways or pedestrian malls.
- Cost of accommodation is excessively disproportionate to the need or probable use. It is unnecessary to attach a percentage to define “excessive” as the context for many projects will require different portions of the over all project budget to be spent on the modes and users expected. Additionally, costs may be difficult to quantify. A cap on amount spent for roadway improvements may be appropriate in unusual circumstances, such as where natural features (e.g. steep hillsides, shorelines) make it very costly or impossible to accommodate all modes. Any such cap should always be used in an advisory rather than absolute sense. A documented absence of current and future need. This exception can be problematic if the method for determining future need is not defined. Ensure that a qualified individual or committee is tasked with approving this exception. Many communities have included other exceptions that the National Complete Streets Coalition, in consultation with transportation planning and engineering experts, also feels are unlikely to create loopholes.
- Transit-specific facilities, such as bus shelters, are not required where there is no existing or planned transit service.
- Routine maintenance of the transportation network that does not change the roadway geometry or operations, such as mowing, sweeping, spot repair, or when interim measures are implemented in temporary detour or haul routes. Be sure to check your internal procedures and policies regarding these activities so that facilities such as bike lanes are swept in a timely manner”.

MONTEREY BAY AREA COMPLETE STREETS ASSESSMENT

As part of the development of the 2014 Monterey Bay Area Sustainable Communities Strategy, staff from the regional transportation agencies in the tri-county area worked with key stakeholders from each jurisdiction to develop criteria for evaluating how well streets meet the needs of all users. The goal of this complete streets needs assessment was to identify deficiencies in the existing transportation networks and opportunities for improvements, which would provide safe mobility for all users including bicyclists, pedestrians, transit riders and motorists, particularly in areas identified for increased density and diversity of land use as part of the Sustainable Communities Strategy. Key components of the Monterey Bay Area Complete Streets Assessment are discussed further in this section and can serve as a model inventory for project sponsors and stakeholders.

Complete Streets Inventory

Compiling an inventory of complete street transportation attributes was the first step in conducting the Monterey Bay Area Complete Streets Assessment. This inventory identified the existing mobility context and documented complete streets facilities and considered gaps in the transportation network and services. It is recommended that project sponsors and stakeholders utilize the inventory provided in Appendix A in whole or in part when developing complete street projects for inclusion in local plans.

To support the complete streets needs assessment, RTPA staff worked with regional transit agencies to identify current and future “high quality transit routes” and “major transit stops” as defined by SB375. Identifying high quality transit routes and major transit stops, which serve 15 minute headways during peak periods, were important in order to identify potential priority areas for pedestrian investments, since the majority of transit trips begin with a roadway user walking to the transit stop.

Complete Streets Project List

The result of the Monterey Bay Area Complete Streets Assessment included a list of transportation projects that would support multi-modal facilities, improve connectivity and reduce vehicle miles traveled within each area. For each project, opportunities were identified to develop low stress routes which emphasize the quality, comfort, convenience and safety of bicycle, pedestrian and transit facilities. Each project list was considered by the respective regional transportation planning agencies for inclusion in the regional transportation plan.

Complete streets projects typically fell into one of the following categories:

- Bicycle/pedestrian enhancements (ex. bicycle lane treatments such as painted or buffered bike lanes and pedestrian buffers such as landscaping, bicycle actuation at traffic signals, pedestrian scale lighting, wider side walks)
- Pedestrian crossing improvement (ex. raised cross walks, enhanced striping contrast, cross walk beacon, bulbouts and pedestrian islands)
- Bike/pedestrian network filler (ex. new bicycle lane or sidewalks which eliminates gap in existing network)
- Bike intersection improvement (ex. bike boxes, bike signal priority)
- New bike/ped connection (ex. new bike/ped path not located on current transportation facility)
- Bike parking facilities (ex. bicycle racks)
- Neighborhood shared streets (ex. pavement markings, wayfinding, traffic control on local streets to give priority to bicycles and pedestrians and reduce vehicle speed and volume)
- Pedestrian place/universal street (ex. roadway or alley with restricted vehicle access which often serves as a plaza for assorted businesses)
- Crosswalk frequency (ex. new/additional cross walks to reduce spacing between cross walks)
- Commercial area bike/ped access (ex. pavement treatments, tactile strips and wayfinding)
- Traffic calming (ex. bulb outs, landscaping)
- High Occupancy Vehicle/transit priority (ex. signal priority for transit and carpool lanes)
- Bus pullouts
- Wayfinding (ex. pedestrian and bicycle scale signage providing information about surrounding amenities)
- Information and incentives for bicycling, walking and transit

Chapter 7: Transitioning To Complete Streets

COMPLETE STREETS TRANSITION PLAN

Implementing complete streets begins with adoption of policies, plans and designs described in this guidebook. Frequently, the last steps in implementing complete streets are the most difficult and involve enacting requirements and regulations and providing funding for complete streets improvements. Specific tools for addressing these challenges are described in this chapter.

Providing all of the ingredients for implementing complete streets will take a significant investment in some communities. Below are some tools that local jurisdictions may want to consider to facilitate the transition of motor vehicle oriented street towards streets that provide a greater range of safe and convenient choices for all users.

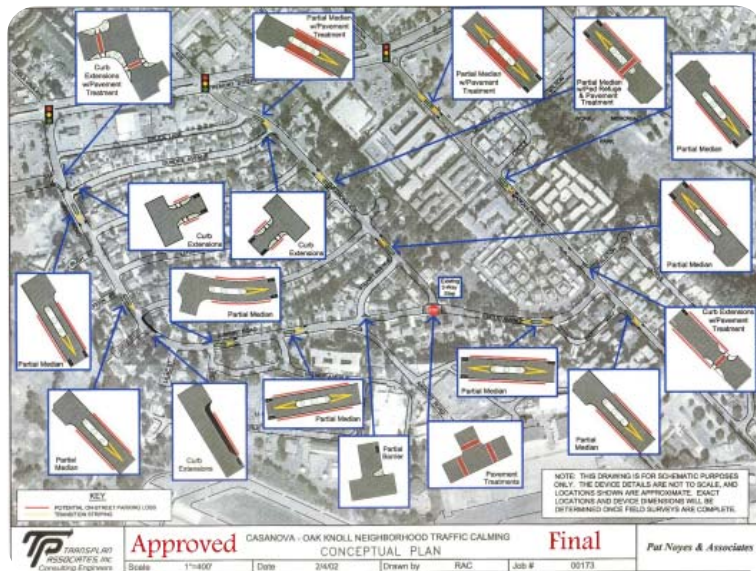
Zoning Ordinance Review

Zoning ordinance, subdivision ordinance, and municipal code may need to be reviewed to identify where policy is weak in establishing standards. The following zoning ordinance features will support implementation of complete streets:

- Requirements for access management and transit-oriented development;
- Regulations that support recommended complete street characteristics and non-motorized site design for development sites, setbacks, and building entrances;
- Regulations promoting higher density and multi-use developments, which encourages walking and bicycling between destinations;
- Regulations that require easements for bicycle and pedestrian facilities and require new development to make improvements consistent with bicycle, pedestrian, transit, and traffic calming plans.
- Incentives for developments that provide enhanced bicycle, pedestrian and transit facilities.

Local Area Plans

Local area specific plans can be helpful in developing a complimentary set of investments which support a systems approach to complete streets. In some cases, local area specific plans may have strong potential for implementing complete streets policies by taking a comprehensive approach to ensuring consistency with higher level plans, while at the same time providing detail which is responsive to specific local area evidence-based needs. In the early 2000s, the City of Monterey worked with residents to develop neighborhood traffic calming plans. Since their adoption, the City has successfully implemented the majority of these plans.

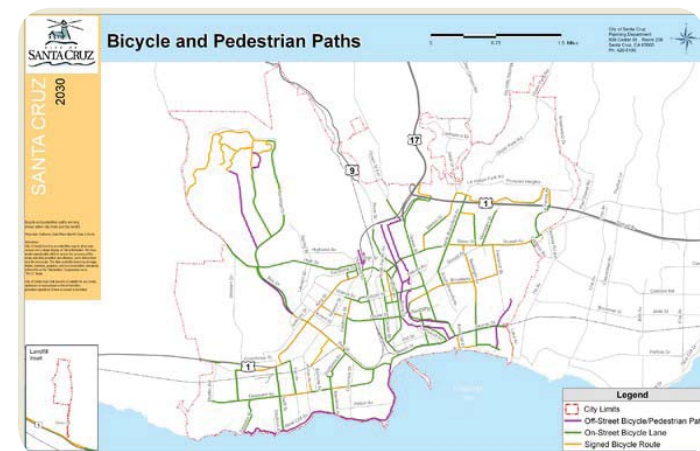


City of Monterey Neighborhood Traffic Calming Plan

Bicycle and Pedestrian Plans

Bicycle transportation plans and pedestrian master plans should also be utilized to develop complete streets projects. Ensuring that complete streets projects are consistent with these mode specific plans is an effective way to support the development of a network of complete streets. Establishing a network of complete streets is important because roadway users typically utilize several transportation facilities and more than one mode when traveling between their origin and destination.

Ensuring that new projects are consistent with bicycle and pedestrian plans can be utilized as strategy for transiting to complete streets, particularly to improve connectivity. For example, the Tahoe Regional Planning Council worked closely with local jurisdictions to establish zoning ordinances for its bicycle and pedestrian plan. These ordinances require new developments to implement bicycle and pedestrian facilities identified in the plan if they are located within or along a proposed development parcel.



FUNDING COMPLETE STREETS

Funding for complete streets project remains a challenge in the Monterey Bay Area where transportation needs far outweigh available transportation funds. Complete streets projects are currently being considered in the development of the Monterey Bay Area Sustainable Communities Strategy as part of a suite of projects to reduce vehicle miles traveled in areas identified for growth and more intensified use. Although many complete streets projects may be identified to receive funding in the long-range transportation plan and sustainable communities strategy, they will need to compete for limited transportation resources.

Existing Funding Sources

- Transportation Development Act Funds
- Regional Surface Transportation Program
- Neighborhood Improvement Program (City of Monterey)
- Bicycle Transportation Account
- Office of Traffic Safety
- Highway Safety Improvement Program
- Transportation Alternatives Program (formerly Transportation Enhancement funds)
- Regional Development Impact Fees

Potential New Funding Sources

Active Transportation Program: Legislation is currently under consideration at the state level to consider consolidating the federal Transportation Alternatives Program, the state Bicycle Transportation Account, the state and federal Safe Routes to Schools and the Environmental Enhancement and Mitigation program into a single statewide competitive program.

Multimodal Impact Mitigation Fees: Development impact fees are now being assessed and applied to bicycle, pedestrian and transit projects. Like traditional impact fees, multimodal impact fees are used to mitigate the cost of new demands on the transportation system resulting from trips incurred by new development. Local jurisdictions with multimodal impact fees are using model projections, multimodal level of service thresholds, or multimodal trip generation rates by land use type, (such as those developed by the Institute of Transportation Engineers), as the mechanism for assessing the mitigation payment amount. Fees are then applied to investments that are reasonably connected to the development impacts. Multimodal impacts fees work in areas where there is already pedestrian, bicycle and transit activity or in areas that could potentially benefit from and support diverse transportation options.

Local Transportation Sales Tax Measure: Over 85% of California residents live in a region with an approved transportation measure which dedicates sales tax funding to transportation projects. Local transportation measures are applied to projects identified in an approved expenditure plan and currently require a two-thirds majority vote.

Public and private grant programs focused on improving health by reducing greenhouse gas emissions, improving air quality and reducing obesity through physical activity may also play a role in funding complete streets projects.

REGIONAL COMPLETE STREETS PHASING PLAN

The tools provided in the Monterey Bay Area Complete Streets Guidebook support a transition from streets that are primarily auto-oriented to streets which safely and comfortably accommodate all users. The Monterey Bay Area Complete Streets Guidebook takes the approach that by incorporating complete streets into policy, plans, and design, streets will begin to become more complete in stages, beginning in the short-term (2020) and continuing into the long-term (2035).

Given the significant need for road rehabilitation throughout the Monterey Bay Area, complete streets improvements that can be coupled with roadway rehabilitation projects are more likely to be completed in the short-term (2020), such as complete street features that can be realized primarily through roadway restriping. Other projects expected to be completed in the short-term are those funded by continuous funding sources such as Transportation Development Act funds, which frequently support curb ramp improvements, and Safe Routes 2 School funds which support bicycle, pedestrian and traffic calming around schools. The projects which require a greater amount of resources will be implemented closer to the 2035 horizon if current funding trend continue.



Short-term projects such as bicycle lane striping



Long-term projects such as the Monterey Branch Line Light Rail Service and Stations

Chapter 8: Education, Encouragement & Enforcement

Education, encouragement, and enforcement programs complement complete street infrastructure programs and can play an important role in achieving complete streets objective.

EDUCATION

Developing complete streets is a critical step in providing alternatives to driving. However, to achieve an actual shift from driving to walking, bicycling or taking transit requires a change not only in the safety and reliability of those alternatives, but also a change in an individual's preference, perception and behavior. . Many local jurisdictions around the Monterey Bay Area are implementing marketing campaigns to encourage healthy and active lifestyles. Obesity and sedentary lifestyles are on the rise for both adults and children in America, and daily exercise needs to be integrated into American lifestyles. In the Monterey Bay Area region, marketing campaigns, such as Bike Week, add support to existing messages of getting more exercise while promoting complete streets principles.

A telephone survey conducted in the AMBAG region in May 2013 provided information regarding travel preferences. Throughout the region, survey participants overwhelmingly indicated that they rely on their cars to travel; however, they felt that if it were more convenient or more comfortable, they would like to walk or bicycle to shopping or recreation destinations. Integrating Complete Streets features into our transportation system can help this desire to become a reality.



Complete Streets policies are viewed as an important element for achieving Safe Routes to School goals, as children are one of our most vulnerable transportation users. Safe Routes to School programs have become tremendously popular not only across the country, but within the Monterey Bay Area. These programs benefit from Complete Streets policies that can help turn all routes into safe routes. Examples of Safe Routes to School Programs include:

- Safe Routes to School Maps
- Bike/Walk to School Day
- Walking School Buses
- Bicycle Train
- Bike to School Day Resource Guide:
- Monterey County: (<http://www.tamcmonterey.org/bikeweek/breakfast.html>)
- San Benito County: (<http://sanbenitorideshare.org/schools/safe-routes-to-school/>)
- Santa Cruz County: (http://bike2work.com/s_cruz/)

Training

Another critical component of a successful education program is providing decision makers and project designers with information on the latest approaches to roadway design to help establish a common level of understanding and facilitate discussions complete streets. Planners are encouraged to hold workshops or provide their elected governing bodies and advisory committees with presentations on facility design and other topics related to bicycling and walking as a means to understand Complete Streets principles. Agencies may want to consider “certifying” staff members as complete streets specialists when a specific level of training in complete streets concepts is completed. Several resources for this type of training are available, including:

- The UC Berkeley Tech Transfer Program
- The Transit Cooperative Research Program (TCRP)
- The National Complete Streets Coalition
- The National Rural Transit Assistance Program

More informal training may involve meeting with local jurisdictions who have experience implementing complete streets policies or hosting roundtables for project sponsors to discuss lessons learned. The regional transportation planning agencies can help educate city and county project planners and designers to ensure that Complete Streets concepts are well understood and can be incorporated into future projects.

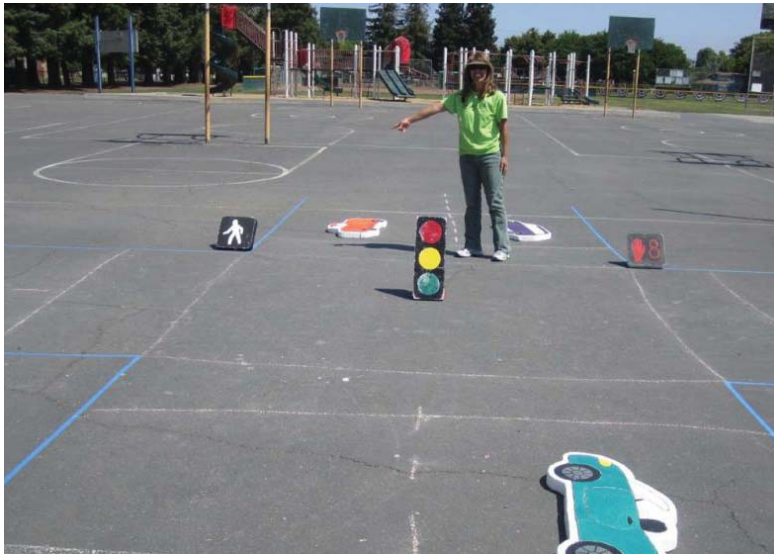
Walking Audits

Walking audits are a tool that can be very useful to educate users about the needs on a particular street. Walking audits can be completed individually or as a group. The auditor(s) should use a checklist to note the overall quality of their travel on the street and identify gaps in the pedestrian network, safety or accessibility concerns, areas needing repair, and other opportunities to enhance the corridor to make it more comfortable for all users.

Vehicle Code

Pedestrians and bicyclists should be educated about vehicle codes related to their transportation mode. The Traffic Safe Communities Network in Santa Clara County has produced a guidebook for this purposes that can be found at: <http://www.ots.ca.gov/pdf/BicyclePedSafetyBrochure.pdf>.

The guide includes references to the California Vehicle Codes that establish safe practices for bicycling and walking. This is a tool that can be used by local jurisdictions to ensure that those walking and bicycling for transportation are informed about their rights and responsibilities.



ENCOURAGEMENT

Communities can encourage the development of complete streets projects by demonstrating the need for and benefits of active transportation and transit. Some activities may include conducting organized community bike rides, walking events and providing transit access to community gatherings. A community may also focus on breaking down barriers to active transportation and transit by producing user-friendly bike maps and transit schedules, providing commuting incentives and bike share programs and offering discounted transit passes. The Monterey Bay area has several events and programs aimed at encouraging walking and biking, including the following:

- Bike Week , including Bike to Work & Bike to School Events
- Walk to School Week
- Condor Classic
- Sea Otter Classic
- Community bicycle rides

In addition, an integral partner in promoting and implementing Complete Street efforts are colleges and universities within the Monterey bay Area. Local jurisdictions may work to share resources and leverage opportunities to educate the public and leadership on the value and implementation of complete streets within the region.

Elementary and high schools are also taking an active role in Complete Streets by helping promote more active lifestyles, such, as encouraging children to walk or bike to school. Bike to School Day and Walk to School Day educational campaigns have been tremendously successful in the region as Complete Streets make it easier for students to get around by all modes of transportation, providing more choices for those who want them. The Transportation Agency for Monterey County offers a Bike to School Day 2012 Resource Guide online at tamcmonterey.org.

ENFORCEMENT

Enforcement emphasizes the complete streets connection between the law enforcement community and project planners and designers. Often times, communities have an established relationship with a liaison within the local police department or California Highway Patrol to monitor and promote safe bicycling and walking. This relationship builds on local efforts to prevent bicycle theft, enforcement campaigns to encourage cyclists and motorists to share the road safely, and understand the California Vehicle Codes addressing safe bicycling and walking.

Enforcement agencies should be encouraged to understand the concepts of Complete Streets planning and design, and work closely with planners, engineers, and policymakers to ensure that users are comfortable when travelling. The rights of both vehicles and non-motorized transportation should be understood by all users, as well as planners and engineers, to ensure that Complete Streets projects can be appropriately enforced.

Code enforcement is another tool that can be used to support the maintenance of safe sidewalks or other maintenance of the traveled way. These codes should be considered by planners and designers when implementing Complete Streets projects.



Chapter 9: Talking About Complete Streets

The accepted definition of complete streets is: roadways designed to meet the needs of all users regardless of mode choice, age or ability. However, the meaning of complete street may vary by community, application or individual. This chapter is intended to serve as a resource for professionals, decision makers and the public who are interested in discussing and educating others about complete streets concepts.

SIMILAR CONCEPTS

The complete streets terminology is similar to terms such as “livable streets”, “context sensitive solution”, “sustainable transportation”, and “transit oriented developed”. All of these concepts give greater emphasis to alternatives to driving alone than traditional transportation planning concepts which primarily focused on vehicle transportation. Each of these newer terms reveal an approach to planning and designing transportation facilities which takes into consideration transit, bicycling and walking and the demands and desires of each community. Unlike the other terms, “complete streets” is the most encompassing phrase associated with this approach and conveys the need for streets to have all the necessary and appropriate parts to achieve its objective, as opposed other concepts that place greater emphasis on one particular transportation design such as transit accommodations, or pedestrian scale facilities.

COMMUNITY VALUE

In order to facilitate dialogue about complete streets between various stakeholders, this section provides some suggestions for talking about complete streets in way that resonates with roadway users not familiar with in transportation planning terminology. Groups that may be engaged in complete streets discussion include, but are not limited to policy makers, advocacy groups, schools, law enforcement, neighborhood associations, and business groups.

When encouraging dialogue about complete streets amongst with stakeholders, begin with a common understanding of complete streets. See Chapter 1: What are Complete Streets, Why Complete Streets? When talking about the benefits of complete streets, consider the following:

What does improved access mean?

- Increasing people's ability to meet most of their daily needs (ex. shopping, school, services, work) without having to drive.
- Improving the convenience of walk, bicycle and transit by designing facilities that provide shorter routes that are not obstructed and reduce weight times at intersections.
- Improving the comfort of walk, bicycle, and transit by designing facilities that are buffered from high traffic volumes or speeds, reducing pedestrian exposure to traffic at intersections and providing lighting and shade.

What does economic benefit mean?

- Reinvesting money in the local economy by reducing fuel consumption and vehicle related expenses.
- Reducing household cost by not spending it on fuel and other vehicle-related expenses
- See Appendix J, Economic Framework for Evaluating Complete Streets.

Why care about safety?

- Traffic crash injuries can result in severe and/or permanent health damage, affecting quality of life and at a great cost to individuals and societies.
- Bicycle and pedestrians are disproportionately negatively impacted by collisions.
- Increasing the number of people of walking, biking, and public transportation use result in lower rates of chronic disease (including cancer, diabetes, stroke, and heart disease) and mortality.
- Slower vehicle speeds have a positive correlation with improved safety for all modes.

Why is equity important?

- People experiencing poverty or language barriers, people of color, older adults, youth, and people with disabilities tend to experience a disproportionately small share of benefits from transportation investments, particularly because traditional transportation investment prioritize vehicles. These groups are overrepresented in households without access to a vehicle.
- Other elements of the transportation system, such as lack of ADA compliance or safe street crossings also create extra barriers that may prevent these groups from experiencing the full benefit of transportation investments

How are the environment and complete streets related?

- The street is a system: a transportation system, an ecosystem and a system of social and economic interactions.
- Improve habitat in right-of-ways.
- Increase tree canopy in rights-of-way which can increase habitat and reduce the urban heat island affect.
- Treat storm water volumes and flow to improve water quality and reduce run off.
- Avoid impacts to natural areas.
- Reduce greenhouse gas emission and fossil fuel consumption by reducing the number and length of vehicle trips and improving the flow of traffic (and minimizing motor idling).

ADDRESSING SPECIFIC USER GROUPS

Consult the following fact sheets developed by Smart Growth American when addressing specific user groups or topics. Go to www.smartgrowthamerica.com to download pdf or view web versions of fact sheets. Smart Growth American offers the following fact sheets:

Children
People with Disabilities
Older Adults
Health
Public Transportation
Climate Change

Economic Revitalization
Gas Prices
Safety
Lower Transportation Costs
Create Livable Communities
Equity

Ease Traffic Woes
Costs of Complete Streets
Change Travel Patterns
Complete and Green Streets
Networks of Complete Streets
Rural Areas and Small Towns

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APPENDIX A: Complete Streets Needs Assessment Matrix

[illegible][illegible]

BICYCLE NEED/FACILITIES

Street	Limit 1	Limit 2	CONNECTIVITY & COMFORT				CROSSINGS		SAFETY	GAPS	PLANNING			
			Bicycle Facility Type	Bicycle Lane Width	Bicycle Parking	Route Signage	Bicycle Detection (Signalized Intersections)	Uncontrolled Crossings (Class I)	Collision History	Bikeway Gaps	Proposed Facilities	ISSUES	RECOMMENDED SOLUTIONS	COMMENTS

TRANSIT NEED/FACILITIES

	CONNECTIVITY & COMFORT												GAPS	PLANNING			
	STOPS & STATIONS							SERVICE									
Street	Cross Street	ADA Access	Bicycle Racks	Distance to Marked Pedestrian Crossing	Shelter	Lighting	Amenities	Routes	Peak Hour Headways	Existing Transit Capacity (along corridor)	Link to Key Destinations	Transit Travel Speeds	Transit Gaps	Proposed Facilities	ISSUES	RECOMMENDED SOLUTIONS	COMMENTS

APPENDIX B: Sample Goals & Policies

Communities may include the entire sample complete streets policy in the general plan circulation element as a complete policy package, or may selectively adopt specific objectives or policies. Communities are encouraged to tailor the policy and implementation measures to local needs, concerns, and conditions, and to identify the local agency or department responsible for implementation. Most circulation elements already include goals, objectives, and policies addressing the needs of motorists and movers of commercial goods, so the package below focuses on other types of users. In tailoring the package for your jurisdiction you may wish to include the entire package as a separate policy set with cross-references to other pre-existing provisions of the circulation element, or you may choose to use some or all of the goals, objectives, and policies below for amendments to existing provisions.

Goal C1: Provide streets that are safe, comfortable, and convenient routes for walking, bicycling, and public transportation to increase use of these modes of transportation, enable active travel as part of daily activities

Objective C1.1: Integrate Complete Streets infrastructure and design features into street design and construction to create safe and inviting environments for people to walk, bicycle, and use public transportation.

“The City will promote context-sensitive streets (i.e., by designing transportation projects within the context of adjacent land uses to improve safety and neighborhood livability, promote transportation choices and meet land use objectives), consistent with the City’s Urban Street Design Guidelines.” – City of Charlotte

Implementing Policies:

C1.1.1. In planning, designing, and constructing Complete Streets:

- o Reference existing planning documents such as the Monterey Bay Area Complete Streets Guidebook and Checklist, local bicycle and pedestrian master plans, specific plans, transit master plans and neighborhood traffic calming plans.
- o Include infrastructure that promotes a safe means of travel for all users along the right of way, such as sidewalks, shared use paths, bicycle lanes, and paved shoulders.
- o Include infrastructure that facilitates safe crossing of the right of way, such as accessible curb ramps, crosswalks, refuge islands, and pedestrian signals; such infrastructure must meet the needs of people with different types of disabilities and people of different ages.

- o Ensure that sidewalks, crosswalks, public transportation stops and facilities, and other aspects of the transportation right of way are compliant with the Americans with Disabilities Act and meet the needs of people with different types of disabilities, including mobility impairments, vision impairments, hearing impairments, and others. Ensure that the [Jurisdiction] ADA Transition Plan includes a prioritization method for enhancements and revise if necessary.
- o Prioritize incorporation of street design features and techniques that promote safe and comfortable travel by pedestrians, bicyclists, and users of public transportation, such as traffic calming circles, additional traffic calming mechanisms, narrow vehicle lanes, raised medians, dedicated transit lanes, transit priority signalization, transit bulb outs, road diets, high street connectivity, and physical buffers and separations between vehicular traffic and other users.
- o Ensure use of additional features that improve the comfort and safety of users:
 - Provide pedestrian-oriented signs, pedestrian-scale lighting, benches and other street furniture, bicycle parking facilities, and comfortable and attractive public transportation stops and facilities.
 - Encourage street trees, landscaping, and planting strips, including native plants where possible, in order to buffer traffic noise and protect and shade pedestrians and bicyclists.
 - Reduce surface water runoff by reducing the amount of impervious surfaces on the streets.

C1.1.2. In all street projects, include infrastructure that improves transportation options for pedestrians, bicyclists, and users of public transportation of all ages and abilities.

COMMENT: This provision, which requires that all street projects on new or existing streets create complete streets, is a fundamental component of a commitment to complete streets.

- o Ensure that this infrastructure is included in planning, design, approval, construction, operations, and maintenance phases of street projects.
- o Incorporate this infrastructure into all construction, reconstruction, retrofit, maintenance, alteration, and repair of streets, bridges, and other portions of the transportation network.
- o Incorporate multimodal improvements into pavement resurfacing, restriping, and signalization operations where the safety and convenience of users can be improved within the scope of the work.
- o Develop systems to implement and monitor incorporation of such infrastructure into construction and reconstruction of private streets.
- o Allow exclusion of such infrastructure from street projects only upon written approval by [the City Manager or a senior manager of an appropriate agency, such as the Department of Public Works], and only where documentation and supporting data indicate one of the following bases for the exemption: (a) use by a specific category of users is prohibited by law; (b) the cost would be excessively disproportionate to the need or probable future use over the long term; (c) there is an absence of current and future need; or (d) significant adverse impacts outweigh the positive effects of the infrastructure.

COMMENTS: This provision provides crucial accountability in the exceptions process by requiring documentation, a transparent decision-making process, and written approval by a specified official. Other exceptions can also be included in this list.

In evaluating whether the conditions of (b) and (c) are met, a jurisdiction may need to conduct latent demand studies, which measure the potential level of use by bicyclists, pedestrians, and others should appropriate infrastructure be provided. Such projections should be based on demographic, school, employment, and public transportation route data, not on extrapolations from current low mode use.

- o Provide an annual report to the [City Council/Board of Supervisors] listing the street projects undertaken in the past year and briefly summarizing the complete streets infrastructure used in those projects and, if applicable, the basis for excluding complete streets infrastructure from those projects.

C1.1.3. Develop policies and tools to improve [Jurisdiction]’s Complete Streets practices:

- o Develop a pedestrian crossings policy, addressing matters such as where to place crosswalks and when to use enhanced crossing treatments.
- o Develop policies to improve the safety of crossings and travel in the vicinity of schools and parks.
- o Consider developing a transportation demand management/commuter benefits ordinance to encourage residents and employees to walk, bicycle, use public transportation, or carpool.
- o Develop a checklist for [Jurisdiction]’s development and redevelopment projects, to ensure the inclusion of infrastructure providing for safe travel for all users and enhance project outcomes and community impact.
- o As feasible, [Jurisdiction] shall incorporate Complete Streets infrastructure into existing public [and private] streets to improve the safety and convenience of Users, construct and enhance the transportation network for each category of Users, and create employment.

C1.1.4. Encourage transit-oriented development that provides public transportation in close proximity to employment, housing, schools, retailers, and other services and amenities.

C1.1.5. Change transportation investment criteria to ensure that existing transportation funds are available for Complete Streets infrastructure.

C1.1.6. Identify additional funding streams and implementation strategies to retrofit existing streets to include Complete Streets infrastructure.

Objective C1.2: Make Complete Streets practices a routine part of [Jurisdiction]’s everyday operations.

Implementing Policies:

C1.2.1. As necessary, restructure and revise the zoning, subdivision, and [insert by name references to other relevant chapters of the city or county code such as “Streets and Sidewalks” or “Motor Vehicles and Traffic”] codes, and other plans, laws, procedures, rules, regulations, guidelines, programs, templates, and design manuals, including [insert references to all other key documents by name], in order to integrate, accommodate, and balance the needs of all users in all street projects on public [and private] streets.

C1.2.2. Develop or revise street standards and design manuals, including cross-section templates and design treatment details, to ensure that standards support and do not impede Complete Streets; coordinate with related policy documents [such as Pedestrian/Bicycle Plans, insert other relevant documents].

Assess current requirements with regard to road width and turning radii in order to determine the narrowest vehicle lane width and tightest corner radii that safely balance other needs; adjust design guidelines and templates to reflect ideal widths and radii.

C1.2.3. Make training available to planning and public works personnel and consultants on the importance of Complete Streets and on implementation and integration of multimodal infrastructure and techniques.

C1.2.4. Encourage coordination among agencies and departments to develop joint prioritization, capital planning and programming, and implementation of street improvement projects and programs.

C1.2.5. Encourage targeted outreach and public participation in community decisions concerning street design and use.

C1.2.6. Establish performance standards with measurable outcomes to assess safety, functionality, and actual use by each category of users; include goals such as:

- o By [2020], facilitate a transportation mode shift so that [20] % of trips occur by bicycling or walking.
- o By [2015], reduce the number of injuries and fatalities to bicyclists and pedestrians by [__] %.
- o Reduce per capita vehicle miles traveled by [__] % by [insert year].
- o Provide a high proportion of streets ([__] %) with sidewalks, low design speeds, tree canopy, and street furnishings.
- o Increase the miles of bicycle lanes and other bikeways by [__] % by [insert year].
- o Increase the miles of sidewalks by [__] % by [insert year]

COMMENT: Other standards could include user satisfaction, percentage reductions in greenhouse gas emissions, and reduction in gaps in the sidewalk network.

C1.2.7. Establish measures of effectiveness for the performance of the circulation system and the effects of new projects on the system, taking into account all modes of transportation including walking, bicycling, and public transportation. Ensure that measures address relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and public transportation; use these measures for planning and in lieu of automobile level of service standards for environmental review.

C1.2.8. Collect baseline data and regularly gather follow-up data in order to assess impact of policies.

- o Collect data for each category of users regarding the safety, functionality, and actual use of the neighborhoods and areas within [Jurisdiction].
- o Track public transportation ridership numbers.
- o Track performance standards and goals.
- o Track other performance measures such as number of new curb ramps and new street trees or plantings.
- o Require major employers to monitor how employees commute to work.
- o All initial planning and design studies, health impact assessments, environmental reviews, and other project reviews for projects requiring funding or approval by [Jurisdiction] shall: (1) evaluate the effect of the proposed project on safe, comfortable, and convenient travel by bicyclists, children, persons with disabilities, pedestrians, users of public transportation, seniors, youth, and families, and (2) identify measures to mitigate any adverse impacts on such travel that are identified.

Objective C1.3: Plan and develop a comprehensive and convenient bicycle and pedestrian transportation network.

COMMENTS: Jurisdictions with existing bicycle or pedestrian plans may have already addressed the policy/action items under this objective. In such jurisdictions, it is not necessary to restate these policy and action items verbatim. Such plans should be reviewed, and, if necessary, revised to complement the complete streets approach. If existing plans address this objective sufficiently, a jurisdiction may incorporate its bicycle and pedestrian plans with language such as: “The provisions set forth in the [Pedestrian/Bicycle Plan] are incorporated into this plan.” If this approach is used, be sure that the incorporated plan is internally consistent with the remainder of the general plan.

For jurisdictions that have not developed a detailed bicycle or pedestrian plan, the policies and actions in this section provide a good way to begin addressing those needs in an integrated fashion.

Implementing Policies:

C1.3.1. Develop a long-term plan for a bicycle and pedestrian network that meets the needs of users, including bicyclists, children, persons with disabilities, pedestrians, users of public transportation, seniors, youth, and families.

- o Conduct a demand analysis for each category of user, mapping locations that are already oriented to each mode of travel and type of user and those for which there is latent demand.
- o For each category of user, map out a preferred transportation network with routes that will enable safe, interconnected, direct, continuous, and efficient travel from each major origination area to each major destination area.
- o Encourage public participation in community decisions concerning the demand analysis, preferred route network, and street design and use to ensure that such decisions: (a) result in streets that meet the needs of all users, and (b) are responsive to needs of individuals and groups that traditionally have not participated in public infrastructure design. Include bicyclists, children, persons with disabilities, motorists, movers of commercial goods, pedestrians, users of public transportation, seniors, youth, families, low-income communities, communities of color, and other distinct social groups, and their advocates. Establish ongoing advisory committees and public feedback mechanisms.
- o Identify and prioritize necessary changes in order to implement the preferred network; prioritize neighborhoods with the greatest need and projects that significantly alleviate economic, social, racial, or ethnic inequities.
- o Ensure that the networks provide ready access to healthy sources of nutrition.
- o Explore the use of non-standard locations and connections for bicycle, pedestrian, and public transportation facilities, such as easements, restored stream corridors, and railroad rights-of way.

C1.3.2. Evaluate timeline and funding of the plan.

- o Assess the degree to which implementation of the plan can be coordinated with planned reconstruction of streets, development projects, utility projects, and other existing funding streams.
- o Develop funding strategies for addressing additional needs; actively pursue funding from state, federal, and other sources.
- o Explore imposing development impact fees and dedication requirements on new development to create paths and other Complete Streets infrastructure.

C1.3.3. In collaboration with [appropriate local agencies and regional transportation planning agencies/metropolitan planning organizations], integrate bicycle, pedestrian, and public transportation facility planning into regional and local transportation planning programs and agencies to encourage connectivity between jurisdictions.

C1.3.4. Develop programs to encourage bicycle use, such as enacting indoor bicycle parking policies to encourage bicycle commuting, or testing innovative bicycle facility design.

Objective C1.4: Promote safety of bicyclists, pedestrians, and public transportation.

COMMENT: As noted for the previous objective, jurisdictions with existing bicycle or pedestrian plans may also choose to omit these items if already addressed in those plans and instead reference those plans.

Implementing Policies:

C1.4.1. Identify physical improvements that would make bicycle and pedestrian travel safer along current major bicycling and walking routes and the proposed future network, prioritizing routes to and from schools.

C1.4.2. Identify safety improvements to pedestrian and bicycle routes used to access public transportation stops; collaborate with [public and private transit agencies operating within Jurisdiction] to relocate stops where advisable.

C1.4.3. Identify intersections and other locations where collisions have occurred or that present safety challenges for pedestrians, bicyclists, or other users; consider gathering additional data through methods such as walkability/bikeability audits; analyze data; and develop solutions to safety issues.

C1.4.4. Prioritize modifications to the identified locations and identify funding streams and implementation strategies, including which features can be constructed as part of routine street projects.

C1.4.5. Collaborate with schools, senior centers, advocacy groups, and public safety departments [insert additional specific departments as appropriate] to provide community education about safe travel for pedestrians, bicyclists, users of public transportation, and others.



C1.4.6. Use crime prevention through environmental design strategies to increase safety for pedestrians, bicyclists, and other users.

C1.4.7. As necessary, public safety departments should engage in additional enforcement actions in strategic locations.

Objective C1.5: Make public transportation an interconnected part of the transportation network.

Implementing Policies:

C1.5.1. Partner with [public and private transit agencies operating within Jurisdiction] to enhance and expand public transportation services and infrastructure throughout [Jurisdiction] and the surrounding region; encourage the development of a public transportation system that increases personal mobility and travel choices, conserves energy resources, preserves air quality, and fosters economic growth.

C1.5.2. Work jointly with [public and private transit agencies operating within Jurisdiction] to provide destinations and activities that can be reached by public transportation and are of interest to public transportation-dependent populations, including youth, seniors, and persons with disabilities.

C1.5.3. Collaborate with [public and private transit agencies operating within Jurisdiction] to incorporate infrastructure to assist users in employing multiple means of transportation in a single trip in order to increase transportation access and flexibility; examples include, but are not limited to, provisions for bicycle access on public transportation, secure bicycle racks at transit stops, access via public transportation to trails and recreational locations, and so on.

C1.5.4. Ensure safe and accessible pedestrian routes to public transportation stops; relocate stops if safe routes are not feasible at current location.

C1.5.5. Work with [public and private transit agencies operating within Jurisdiction] to ensure that public transportation facilities and vehicles are fully accessible to persons with disabilities.



C1.5.6. Explore working with [public and private transit agencies operating within Jurisdiction] to provide travel training programs for seniors and persons with disabilities, and awareness training for vehicle operators.

C1.5.7. Explore creation of public transportation priority lanes to improve travel time.

C1.5.8. Partner with [public and private transit agencies operating within Jurisdiction] to collect data and establish performance standards related to these steps.

- i. Note that many types of accommodations for people with disabilities are mandated by federal law under the Americans with Disabilities Act.
- ii. A road diet is a transportation technique in which the number or width of lanes dedicated to motor vehicle traffic is decreased, often by combining the two central lanes into a single two-way turn lane, in order to create additional space within the right of way for features such as bicycle lanes, sidewalks, or buffer zones.
- iii. Connectivity describes the directness of routes and density of connections in a street network. A street network with high connectivity has many short links, numerous intersections, and few dead-end streets. As connectivity increases, travel distances decrease and route options increase, allowing more direct travel between destinations.
- iv. Crime prevention through environmental design (CPTED) involves designing the built environment to deter criminal behavior. CPTED aims to create environments that discourage the commission of crimes by influencing offenders to not commit a contemplated crime, usually due to increased fear of detection.

APPENDIX C: Multimodal Network Quality Analysis

MULTIMODAL NETWORK QUALITY ANALYSIS

Some communities are not pursuing new Multimodal Level of Service measures as defined in the Highway Capacity manual because collecting the new data required can be resource intensive. Instead, some communities are choosing more qualitative measures of multimodal effectiveness. The Santa Cruz County Regional Transportation Commission rested tested a Multimodal Network Quality of Service measure to evaluate how transportation investment affected the quality and convenience of bicycle, and pedestrian trips. The methodology used was developed as a cooperative effort with the Sustainable Transportation Council, the agency responsible for developing the Sustainable Transportation Analysis and Rating System. The analysis methods used are based on the multimodal network quality of service measures applied in Burien, Washington.

PEDESTRIAN SYSTEM SCORE METHODOLOGY

Pedestrian network quality standards utilize scoring criteria for sidewalks/paths. The criteria focus on the factors that make a good pedestrian environment based on the character of the street. Therefore there are different thresholds for arterials/collectors and local roads. The service score designations are show as green, yellow, and red. A green score is defined as a high quality pedestrian route. A yellow score indicates acceptable conditions, while a red score would not be attractive to many potential pedestrians (Table 1).

Table 1. Pedestrian MMNQ Score		
Network Score	Along Arterials and Collectors	Local Roads
	6' Sidewalk and 3' buffer or tree wells on both sides	Sidewalks on both sides
	Sidewalk on both sides	Sidewalk on one side
	No Sidewalk on one or both sides	No Sidewalk

Table 2. Bicycle MMNQ Score

Roadway Classification	Bike Route	Bike Lanes	Shared Use Trail
Local	≤ 25 mph		
Collector	≤ 35 mph	≤ 30 mph	
Minor Arterial			
Arterial		≤ 40 mph	

The scoring system for the bicycle network depends on the type of bicycle facility provided: bike route, bike lane, or shared use trail. As shown in Table 2, roadway classification and speed are intended to guide the determination of which bicycle facility type is most appropriate for a given roadway. Unlike with the pedestrian MMNQ analysis, bicycle MMNQ analysis is not performed on every street. Only the streets identified as having a facility are included in this analysis, since some streets may not be appropriate for cycling.

DATA REQUIREMENTS

Data related to roadway functional class, sidewalk width, presence of buffer, bicycle facility type (route, lane, path) and roadway speed were all taken into account when evaluating the MMNQ score.

APPENDIX D: Complete Streets Action Plan Template

NAME: [Jurisdiction]

DATE:

COMPLETE STREET ACTION PLAN				
IMPLEMENTATION ACTION*	TIMELINE			LEAD DEPARTMENT
	Short	Long	Ongoing	
General Plan Vision				
General Plan Policy & Goals				
Transportation Plan Policy & Goals				
Performance Measures				
Planning Guidance Manual				
Street Design Standards & Specifications				
Transportation Analysis/ Impact Guidelines				
Maintenance Manuals				
Funding Guidelines				
Training Standards				

*Titles and actions may vary by jurisdiction. This list is meant to serve as an example only.

APPENDIX E: Legal Standing of Street Manual

Note: The discussion included in this Appendix was adopted from the Los Angeles County Model Design Manual for Living Streets, 2011.

Local jurisdictions generally follow some established standards for designing streets. Much confusion exists as to what they must follow, what is merely guidance, when they can adopt their own standards, and when they can use designs that differ from existing standards. The text below untangles the myriad of accepted design documents. It is critical for cities and counties to understand how adopting this manual meshes with other standards and guides. The most important of those standards and guides are the following:

- The American Association of State Highway and Transportation Officials' (AASHTO) A Policy on Geometric Design of Highways and Streets (the “Green Book”)
- The California Highway Design Manual
- Local manuals or street design standards
- The Manual on Uniform Traffic Control Devices (MUTCD)
- The California Fire Code
- The California Streets and Highways Code and California Vehicle Code



A discussion of the federal-aid roadway classification system helps to frame the requirements of each of these documents. Local governments that wish to use certain federal funds must use a street classification system based on arterials, collectors, and local streets. These funds are for streets and roads that are on the federal-aid system. Only arterials and certain collector streets are on this system. In Chapter 3, “Street Networks and Classifications,” this manual recommends an alternative system. To maintain access to these federal funds, local jurisdictions can use both systems. The federal aid system encourages cities to designate more of these larger streets, and to concentrate modifications along these larger streets. Nevertheless, for the purposes of understanding design standards and guides, this is the existing system of street classification for federal funding.

AASHTO GREEN BOOK

The Green Book provides guidance for designing geometric alignment, street width, lane width, shoulder width, medians, and other street features. The Green Book applies only to streets and roads that are part of the National Highway System (NHS). These are Interstate Freeways, principal routes connecting to them, and roads important to strategic defense. These streets and roads comprise about 14 percent of all federal-aid roadway miles in California, and about 4 percent of all roadway miles (Urgo, J., Wilensky, M., and Weissman, S., *Moving Beyond Prevailing Street Design Standards*, The Center for Law, Energy, and the Environment at the Berkeley Law School, 2010). Although the Green Book’s application is limited to these streets, some cities apply its recommendations to all streets.

Further, the Green Book provides guidance that cities often unnecessarily treat as standards. The Green Book encourages flexibility in design within certain parameters, as evidenced by the AASHTO publication *A Guide to Achieving Flexibility in Highway Design*. For example, 10-foot lanes, which cities often shun out of concerns of deviating from standards, are well within AASHTO guidelines.

CALIFORNIA HIGHWAY DESIGN MANUAL

The California Highway Design Manual (HDM) applies only to State Highways and bikeways within local jurisdictions. If cities deviate from the minimum widths and geometric criteria for bikeways spelled out in Chapter 1000 they are advised to follow the exemption process or experimental process as applicable. The HDM does not establish legal standards for designing local streets. However, like the Green Book, some cities apply HDM guidance to all streets.

As of the writing of this manual, Caltrans is in the process of revising the HDM to meet Caltrans' commitment to Complete Streets in Deputy Directive 64-R1.

LOCAL STREET MANUALS

Local jurisdictions follow the Green Book, the HDM, or design guidance from organizations such as the Institute of Transportation Engineers (ITE) out of liability concerns. Neither federal nor state law mandates adoption or adherence to these guides. However, municipalities often adopt them to protect themselves from lawsuits. Further, many don't have the resources to develop their own standards and practices, so they adopt those in the Green Book, the HDM, or another previously adopted manual, or those of other cities,

A question often posed by plaintiffs' attorneys in traffic-related crashes is, "Did they follow established or prevailing designs, standards, and guidance?" If the attorneys can prove that the local jurisdiction deviated from these, they enhance their chances of winning a judgment against the jurisdiction. Therefore, protection from liability is paramount.

Cities are authorized to adopt or modify their own practices, standards, and guidelines that may reflect differences from the Green Book and the HDM. If these changes generally fall within the range of acceptable practice allowed by nationally recognized design standards, the adopting agencies are protected from liability to the same extent they would be if they applied the Green Book or the HDM. Most changes to streets discussed in this manual fall within the range of the guidelines or recommended practices of nationally recognized organizations such as AASHTO, ITE, Urban Land Institute (ULI), and Congress for the New Urbanism (CNU).



Working within previously established regional guidelines generally should result in a design that is protected from liability. The Green Book and the HDM are silent on many design features, and do not consider the needs within unique contexts. In these cases, cities can develop their own guidelines and standards and incorporate international equivalents or practices from other cities. Cities may adopt the guidance in this manual, which compiles best practices in creating living streets. This manual could, in effect, become the legal prevailing standard by which liability would be assessed.

Cities can also utilize designs that fall outside the ranges specified by nationally accepted guidelines and standards, but these practices can potentially increase liability unless done with great care. When agencies elect to utilize designs that fall outside the guidelines of nationally recognized documents, they need to use additional care to ensure they do not expose themselves to liability.

To minimize liability, local jurisdictions either need to adopt their own standards (which should be based on rationale or evidence of reasonableness), or they can conduct an experimental project. When conducting an experimental project, agencies need to show that they are using the best information that is reasonably available to them at the time, document why they are doing what they are doing, use a logical process, and monitor the results and modify accordingly. This is because the agency may be required in the future to show that its design is reasonable, and the agency may not be able to cite a nationally published guideline or recommendation to support its local action. Often, these experimental projects are conducted because the design engineer has reason to believe that the new or evolved design will be safer or otherwise more effective for some purpose than if the project had prevailing standards and guides been used. These reasons or rationales are based on engineering judgment and should be documented to further minimize exposure to liability.

Unless otherwise noted, everything in this manual can readily be adopted and incorporated without fear of increased liability. In addition, this manual carries the credibility of the many top-level experts who produced it.

In some cases, AASHTO design guidelines may not provide information on innovative or experimental treatments that have shown great promise in early experiments and applications. Since AASHTO is a design guide, agencies have some flexibility to use designs that fall outside the boundaries of the AASHTO guide. Deviation from the range of designs provided in the AASHTO guide requires agencies to use greater care and diligence to document their justification, precautions, and determination to deviate from the guidelines. In California, the precautions to establish



“design immunity” should be followed. These include consideration/analysis and approval by a registered engineer qualified to sign the plans, and certification by the city council or reviewing body clearly indicating the agency’s intent. This process documents the engineering judgment that went into the design.

Many cities today use various traffic calming measures to slow traffic and to improve neighborhood livability. Traffic calming measures are not traffic control devices and therefore the state exercises no jurisdiction over them.

Local agencies may currently use many other reports and documents to guide their roadway design and transportation planning. Other documents provide valuable procedure and reference data, but they do not set standards. They can be referred to and defined as standards by local agencies, but the local authority often has the flexibility to selectively endorse, modify, or define how these informational documents can be used or incorporated into its engineering and planning processes. Also, newer versions of these documents have additional information that can conflict with the local historical approach.

The expected results of the design approaches presented in this document are generally intended to improve safety and/or livability. As a result, implementation of these features should generally reduce liability and lawsuits. There is no way to prevent all collisions or lawsuits, but adopting policies, guidelines, and standards and doing experimental projects with reasonable precautions is a defensible approach.

MUTCD

The MUTCD provides standards and guidance for the application of all allowed traffic control devices including roadway markings, traffic signs, and signals. The Federal Highway Administration oversees application of the MUTCD. California cities must follow the California MUTCD, which generally mirrors the federal MUTCD, but not always.

The rules and requirements for the use of traffic control devices are different than for street design criteria. Local agencies have limited flexibility to deviate from the provisions of the California MUTCD in the use of traffic control devices due to the relationship between the MUTCD and state law. The California MUTCD does provide flexibility within its general provisions for items such as application of standard traffic control devices, use of custom signs for unique situations, traffic sign sizes, and sign placement specifics. In contrast, agencies do not generally have the flexibility to



develop signs that are similar in purpose to signs within the manual while using different colors, shapes, or legends. Agencies are also not authorized to establish traffic regulations that are not specifically allowed or are in conflict with state law. The provisions of the California MUTCD and related state laws thus make it difficult to deploy new traffic control devices in California. This can result in complications, especially in the areas of speed management, pedestrian crossings, and bikeway treatments.

The State of California and the Federal Highway Administration have procedures that allow local agencies to experiment with traffic control devices that are not included in the current MUTCD. Such demonstrations are not difficult to obtain from the Federal Highway Administration for testing of new devices, especially as they relate to pedestrian and bicycle facilities, but the requesting agency must agree to conduct adequate before-and-after studies, submit frequent reports on the performance of the experimental device, and remove the device if early results are not promising. The State process can be more difficult for obtaining approval. Federal approval must be obtained first. The California Traffic Control Devices Committee advises Caltrans, which must then agree to allow the experiment to be conducted and determine that the experiment is not in conflict with State law. Once approval is granted for the experiment, the city has been given some legal immunity from liability suits. Since the California Vehicle Code is written to mirror the MUTCD, provisions within the Vehicle Code may not allow the experiment to proceed. The need to modify the Vehicle Code can complicate obtaining State permission to experiment.

Both the federal and California MUTCD are amended through experimentation. After one or more experiments have shown benefit, the new devices are sometimes adopted into these manuals. In California, the Vehicle Code must be changed first if the Vehicle Code prevents use of the new device.

The federal MUTCD and California MUTCD establish warrants for the use of some traffic control devices. For example, stop signs, traffic signals, and flashing beacons are expected to meet minimum thresholds before application. These thresholds include such criteria as number of vehicles, number of pedestrians or other uses, distance to other devices, crash history, and more. These warrants often prevent local engineers from applying devices that, in their opinion, may improve safety. For example, trail and/or pedestrian crossings of busy, high-speed, wide arterial streets may need signals for user safety, but they may not meet the warrants.



As with street design guidelines, cities may establish their own warrants or modify those suggested by the California MUTCD to suit their context in order to use some traffic control devices. In special circumstances that deviate from their own warrants, cities need to document their reasons for the exception. For example, they may say the trail crossings or school crossings qualify for certain traffic control devices.

CALIFORNIA FIRE CODE

The California Fire Code can impede street design in limited circumstances. The state legislature has adopted the National Fire Code. The National Fire Code is written by a private agency and has no official legal standing unless states or municipalities adopt it, as has been done in California. The primary barrier caused by this adoption is the requirement for a minimum of 20 feet of an unobstructed clear path on streets. To comply with this, streets with on-street parking on both sides must be at least 34 feet wide. This prevents municipalities from designing “skinny” and “yield” streets to slow cars and to make the streets safer, less land consumptive and more hospitable to pedestrians and bicyclists.

There are ways around this requirement. If the local jurisdiction takes measures such as installing sprinklers and adding extra fire hydrants, or the adjacent buildings are built with fire retardant materials, it may be able to get the local fire department to agree to the exception.

Alternatively, the state legislature could repeal its adoption of the 20-foot clear path requirement due to

- The arbitrary and unresearched nature of the provision
- The safety problems associated with the resulting excessively wide streets
- The contradiction that this provision causes with properly researched guidelines and standards by ITE, CNU, AASHTO, and others for streets under 34 feet wide
- The potential liability that the 20-foot clear provision creates for designers who maintain, modify, or design streets that do not provide 20-foot clear paths

It is likely that the state legislature was unaware of these issues when it adopted the code in its entirety.



CALIFORNIA STREETS AND HIGHWAYS CODE AND CALIFORNIA VEHICLE CODE

The California Streets and Highways Code and the California Vehicle Code include laws that must be followed in street design. These are embodied in the California MUTCD. Changes to the Streets and Highways Code and the Vehicle Code may cause the California MUTCD to change.

APPENDIX F: Land Use Place Type Matrix

Urban Place Types				
	Intensity	General Characteristics		Examples
		Land Use	Transportation	
U-1 Urban Single-Family Residential 	Low to Medium Intensity (6 to 18 units per acre)	Single-family homes in close proximity to urban centers, typically laid out in a grid block pattern. Includes occasional duplexes, accessory units, and/or small multi-unit buildings. Compact development pattern with small lots, limited setbacks, and close proximity of structures.	Short blocks, grid street pattern, and proximity to destinations support non-motorized modes of transportation. Complete sidewalks and bicycle infrastructure typically present. Neighborhoods served by bus service with typical 30-minute headways; occasional proximity to multi-modal, regional, or intercity transit stations.	Chestnut Street, Santa Cruz Hellam Street, Monterey
U-2 Urban Multi-Family Residential 	Medium Intensity (12 to 30 units per acre)	Small and large apartment buildings, duplexes, accessory units, and limited single-family homes in close proximity to urban centers. Well-integrated into the surrounding urban fabric. One- to five-story residential buildings on small to medium lots with minimal setbacks from property lines and adjacent structures. Building entrances typically oriented to the street.	Short blocks, grid street pattern, land-use diversity, and proximity of destinations support non-motorized modes of transportation. Complete sidewalks and bicycle infrastructure typically present. Neighborhoods served by bus service with typical 30-minute headways; occasional proximity to multi-modal, regional or intercity transit stations.	Clay Street, Monterey 3rd Street, Santa Cruz
U-3 Urban Commercial 	Low Intensity (FAR 1.0 or less)	A high concentration of retail, service, and office uses organized in a grid block pattern. A pedestrian-friendly environment supported by active ground floor building frontages, entrances oriented to the street, parking located to the rear of lots, and buildings placed at or near property lines.	Short blocks, grid street pattern, land-use diversity, and proximity of destinations support non-motorized modes of transportation. Wide sidewalks support pedestrian circulation; motorists frequently park once to visit multiple destinations. Multiple bus routes typically with 30-minute headways; occasional presence of multi-modal, regional or intercity transit stations.	Downtown Santa Cruz Downtown Monterey

U-4 Urban Mixed Use 	Medium to High Intensity (FAR greater than 2.0) Commercial, office, and residential uses in medium- to large-scale buildings. Vertical mixed use with residential or office above ground floor retail is typical. A pedestrian-friendly environment supported by active ground floor building frontages, entrances oriented to the street, parking located to the rear of lots, and buildings placed at or near property lines.	High-quality pedestrian infrastructure supports pedestrian circulation. Short blocks, grid street pattern, land-use diversity, and proximity of destinations support non-motorized modes of transportation; motorists frequently park once to visit multiple destinations. Transit typically includes modest to robust bus service, with headways averaging 15 to 30 minutes.	Downtown Santa Cruz Downtown Monterey
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Suburban Place Types				
	Intensity	General Characteristics		Examples
		Land Use	Transportation	
S-1 Single-Family Residential 	Low Intensity (3 to 8 units per acre)	Single-family homes in self-contained residential neighborhoods. One- to two-story buildings typically on 5,000 to 15,000 square foot lots with moderate to large setbacks.	Automobile-oriented with resident-serving local, collector, and occasionally arterial streets. Limited local transit service and park-and-ride lots. Sidewalks and bicycle facilities for recreational use.	Cliffwood Heights neighborhood, Capitola Deer Flat neighborhood, Monterey Hillcrest neighborhood, Hollister
S-2 Multi-Family Residential 	Low to Medium Intensity (10 to 25 units per acre)	Duplexes, apartment complexes, subdivided houses, and mobile home parks in a generally low-density setting. Generally one- to four-story buildings on lots of varying sizes, often inward-oriented.	Automobile-oriented, most often found along collector or arterial streets. Limited local transit service and park-and-ride lots. Sidewalks and bicycle facilities for recreational use.	Bay Tree Apartments, Scotts Valley Caputo Court, Hollister Footprints on the Bay, Monterey

S-3 Neighborhood Commercial 	Low intensity (FAR less than 0.5)	Stand-alone retail buildings, strip malls, local-serving big-box stores, and smaller-scale offices or office parks. Usually one story buildings occupying low proportion of total lot area; offices in some instances are multi-story. Typically set far back from street.	Automobile-oriented with large parking areas and limited pedestrian access, usually found along arterial streets. Limited local or, in rare instances, intercity transit service. Sidewalks and bicycle facilities usually absent or limited.	Forest Ave-Fairway Shopping Center, Pacific Grove McCoy-Meridian Shopping Center, Hollister Kings Village Shopping Center, Scotts Valley
S-4 Regional Commercial 	Low intensity (FAR less than 0.5) or occasionally Moderate intensity (FAR 1.0 to 2.0)	Large-scale retail or entertainment uses with a regional draw, including shopping malls, national-chain big-box stores, and tourist destinations. Most frequently occurs as large retail stores with substantial surrounding parking areas, but may also include more pedestrian-oriented or urban forms, especially for tourist destinations.	Automobile-oriented, with most shoppers or visitors arriving by car; usually found along arterial streets or in core commercial areas. Transit access varies by setting, but in most instances includes only limited local or, in rare instances, intercity transit service. Except when located in core commercial areas, pedestrian and bicycle access and amenities tend to be limited or absent.	Capitola Mall Cannery Row, Monterey Airline Highway Shopping Center, Hollister Sand Dollar Shopping Center, Sand City
S-5 Employment Center 	Low to Medium intensity (FAR from less than 1.0 to 2.0)	Office and research-oriented industrial land uses with medium to high employment densities. Buildings typically have low to moderate lot coverage; may have multiple stories or higher lot coverage. Suburban-style office parks, with multi-story office buildings and large parking lots are typical, as are stand-alone office buildings with surrounding parking.	Usually auto-oriented with large areas of surface parking, or occasionally parking garages. May in limited instances include internal pedestrian-oriented features. Transit service is reflective of surrounding place types, but is typically similar to other suburban place types, with limited service and frequency. Larger employment centers may feature private shuttle services.	Tres Pinos Road and Rancho Drive, Hollister Ryan Ranch Office Park, Monterey
S-6 Neighborhood Mixed Use 	Medium intensity (25 or more units per acre; FAR usually 2.0 or greater)	Multi-family, mixed-use developments with ground-floor, neighborhood-serving retail or office uses. Usually found in newly built traditional neighborhood developments or as infill along existing commercial corridors. Buildings usually have high lot-coverage, with no setbacks and pedestrian-oriented entrances directly fronting the street.	Pedestrian, bicycle, and transit oriented with bicycle parking, limited or tucked-away car parking, and pedestrian amenities. Transit service typically similar to other suburban place types, but with greater potential for increased transit service and facilities.	Capitola Beach Villas Greenfield Village

Town Place Types				
	Intensity	General Characteristics		Examples
		Land Use	Transportation	
T-1 Town Single-Family Residential 	Low to Medium Intensity (6 to 15 units per acre)	Single-family homes in close proximity to town centers or pedestrian-oriented commercial corridors, typically laid out in a grid block pattern. Includes some duplexes, accessory units, or small multi-unit buildings. Compact development pattern with small lots, limited setbacks, and close proximity of structures.	Short blocks, grid street pattern, and proximity to destinations support non-motorized modes of transportation. Complete sidewalks often present; bicycle infrastructure typically limited. Neighborhoods served by bus service with 30-minute or more headways; occasional proximity to regional or intercity transit service.	Jewel Box, Capitola Maple Street, Salinas 6th Street, Hollister
T-2 Town Multi-Family Residential 	Medium Intensity (12 to 30 units per acre)	Combination of apartment buildings, duplexes, accessory units, and some single-family homes. Usually located in areas with traditional street patterns. One- to three-story residential buildings, typically with small setbacks from the street and property lines.	Short blocks, grid street pattern, and proximity to destinations support non-motorized modes of transportation. Complete sidewalks often present; bicycle infrastructure typically limited. Neighborhoods served by bus service with 30-minute or more headways; occasional proximity to regional or intercity transit service.	Laine Street, New Monterey Neighborhood East Riverside Drive, Watsonville
T-3 Town Commercial 	Low intensity (FAR 1.0 or less)	Pedestrian-oriented commercial uses in town core commercial areas or along commercial corridors. Usually in areas with traditional street patterns. One-story buildings, often with no setbacks and sometimes with full lot coverage. Entrances usually face the street. Lots occasionally include parking, usually located at rear.	Short blocks, grid street pattern, and nearby residential uses support non-motorized modes of transportation. Complete sidewalks often present; bicycle infrastructure typically limited. Transit typically includes limited local service, with headways as short as 30 minutes. Many visitors arrive by car, particularly when traveling long distances.	Bay and Mission Street, Santa Cruz Downtown Carmel

T-4 Town Mixed Use 	Low to Medium Intensity (FAR 1.0 to 3.0)	Small-scale, mixed-use buildings typically in core commercial areas or along commercial corridors. Usually in areas with traditional street patterns. Vertical mixed use buildings common with residential and office above ground-floor commercial. Buildings typically built to property lines; parking may be included, usually to the rear of buildings.	Short blocks, grid street pattern, and nearby residential uses support non-motorized modes of transportation. Complete sidewalks often present; bicycle infrastructure typically limited. Transit typically includes limited local service, with headways as short as 30 minutes. Many visitors arrive by car, particularly when traveling long distances.	Capitola Village 5th Street, Hollister Lighthouse Avenue, Pacific Grove
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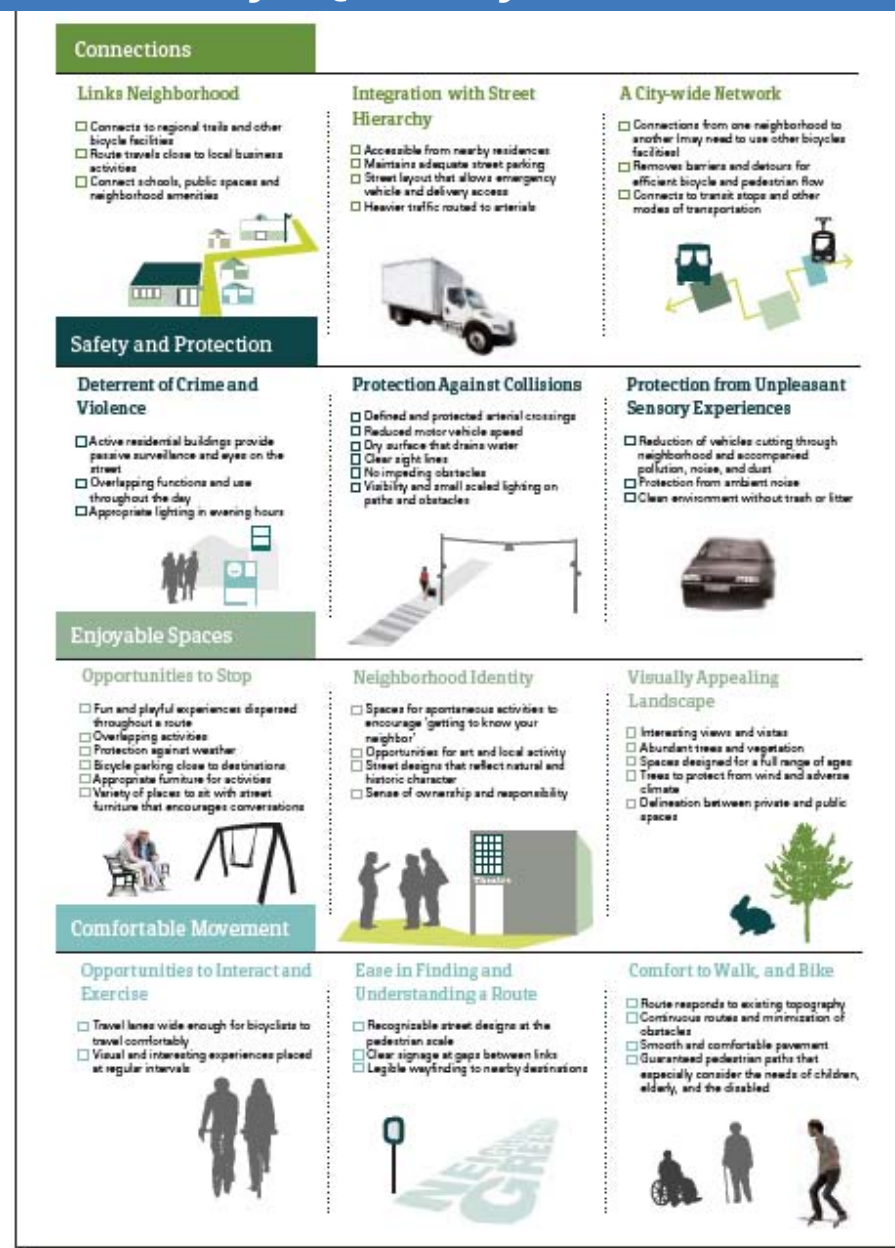
Non-Urban Place Types				
	Intensity	General Characteristics		Examples
		Land Use	Transportation	
NU-1 Agriculture and Rural Residential 	Very Low Intensity (1 unit per acre or less)	Isolated single-family homes, farm houses, and other agriculture-related structures in an agricultural or rural setting. Various building heights and sizes, frequently 2-stories or less, often with expansive setbacks from roads and property lines.	Automobile dependant with widely-spaced, generally rectilinear road patterns. Transit absent or restricted to limited and infrequent regional or inter-city service. Sidewalks and other pedestrian/bicycle infrastructure usually absent.	Outlying portions of Greenfield Outlying portions of San Juan Bautista
NU-2 Rural-Town Commercial 	Low Intensity (FAR usually less than 1.0, up to 2.0 in rare instances)	Variety of small commercial buildings usually located in centers of compact, rural towns. Buildings usually one-story with parking at front or rear. In some cases may not include parking and may include second story with upstairs use.	Mixture of pedestrian- and automobile-oriented. Short blocks, grid street pattern, and nearby residential uses support non-motorized modes of transportation; however, cars may be more commonly used, especially by visitors traveling regionally. Transit absent or restricted to limited and/or infrequent regional or inter-city service. Sidewalks generally present, but may be absent in some cases. Dedicated bicycle infrastructure usually absent.	3rd Street, San Juan Bautista Marriott Street, Castroville Alta Street, Gonzales

NU-3 Rural-Town Residential 	Low Intensity (3 to 8 units per acre)	Single-family homes in areas with grid street patterns; close proximity to central areas of compact, rural towns. May include small multi-family buildings such as duplexes or homes with accessory units. One- or two-story buildings on small- to medium-sized lots. Homes have variable setbacks from property lines and other buildings.	Short blocks, grid street pattern, and proximity to local destinations support non-motorized modes of transportation for intra-city trips; however, cars may be more commonly used, especially for regional trips. Transit absent or restricted to limited and infrequent regional or inter-city service. Sidewalks may be absent, but generally low traffic may promote non-motorized transportation. Dedicated bicycle infrastructure usually absent.	6th Street, San Juan Bautista Scott Street, Chualar 9th Street, Gonzales
NU-4 Exurban Residential 	Very Low to Low Intensity (usually 1 unit per acre or less, on rare occasions up to 6 units per acre)	Single-family homes located in neighborhoods on urban fringe. Usually characterized by non-grid street patterns and relatively long distances to noncontiguous urban or town centers. One or two story buildings on large lots with deep setbacks. In rare instances may include smaller "suburban" style lots located far from central areas of towns or cities.	Automobile oriented, often with long distances separating different land uses. Non-grid, typically low-connectivity street patterns discourage non-motorized transportation for non-recreational trips. Transit absent or restricted to limited and infrequent express or regional service; park-and-rides occasionally present. Sidewalks and dedicated bike paths typically for recreational use.	Pasadena Neighborhood, Monterey Fairview Road, Hollister Crescent Drive, Scotts Valley

Other Place Types				
	Intensity	General Characteristics		Examples
		Land Use	Transportation	
IND Industrial and Manufacturing 	Various Intensities (FAR from less than 1.0 to 4.0 or higher)	Various industrial and manufacturing uses, including factories, storage facilities, industrial and commercial suppliers, and some research and development uses. Street patterns and building forms vary, ranging from traditional blocks and pedestrian-oriented configurations to isolated facilities inaccessible by non-motorized transportation.	Transportation characteristics vary, with both pedestrian- and auto-oriented development patterns. Availability of transit, pedestrian access, and bicycle infrastructure vary depending upon setting.	Industrial Drive, Hollister Los Coches Road, Salinas Estados Drive, Aptos

AT Airport 	N/A	Airports.	Transportation characteristics vary.	Monterey Peninsula Airport Hollister Municipal Airport
INS Institutional 	Various Intensities (FAR from less than 1.0 to 4.0 or higher)	Various Institutional, civic, public, educational, hospital, and utilities uses located in various settings. Built forms vary by specific use and location.	Transportation characteristics vary, with both pedestrian- and auto-oriented development patterns Availability of transit, pedestrian access, and bicycle infrastructure are all variable, depending upon setting.	UC Santa Cruz Salinas High School Public Libraries Wastewater Treatment Plants
OSR Open Space / Recreation 	N/A	Open space and recreational uses, including local and regional parks, nature preserves, and beaches.	Transit characteristics highly variable. Isolated regional parks or wilderness areas may lack transit connections and pedestrian/bicycle access. Parks in urban centers may have frequent transit service and complete bicycle/pedestrian infrastructure.	Village Green, Greenfield Ramsay Park, Watsonville Calaveras Park, Hollister

APPENDIX G: Greenway Quality Criteria



Green Futures: Research and Design Lab, Scan Design Foundation, GEHL Architects. *Seattle Neighborhood Greenways: Seattle Tool Kit 2012*

COMPLETE STREETS PROJECT REVIEW CHECKLIST

Purpose

This checklist was developed to assist project sponsors in defining and developing projects and local plans using the Monterey Bay Area Complete Streets Guidebook. The checklist is a mechanism for incorporating the perspectives of all stakeholders into the planning and design process for projects. Use of the checklist will result in projects that are consistent with local, regional and state complete street policies, consider adjacent land uses and meet the needs of all users of the roadway.

How to Use the Checklist

The checklist enables project sponsors to document how each existing and future roadway user was considered and accommodated throughout the project development process. Project sponsors are encouraged to reference the Monterey Bay Area Complete Streets Guidebook while going through the checklist for complete streets applications and roadway design ideas.

Public Works and Planning departments should use the checklist to review projects within or affecting the public right-of-way. If projects do not incorporate complete streets design treatments, project sponsors should document why not and what accommodations will be provided for pedestrians, bicyclists and/or transit users unless the project is exempt.

Threshold Requirements

The Complete Streets Project Review Checklist should be used to review the following types of projects:

1. Street improvements requiring permits or approvals by the Department of Planning and/or Public Works which requests a change of the public right of way ; or
2. Public Works Department capital projects that alter or maintain the public right of way prior to the issuance of any permit or approval

Such that any one or more of the following apply:

- A traffic study is required
- A signalized intersection is affected
- Repaving/restriping needed
- Rehab/maintenance needed



CHECKLIST - Exemptions

Projects Exempt from Using the Complete Streets Project Review Checklist

- * Roadways that restrict bicycle and pedestrian access (ex//Freeways)
- * Documented absence of current and future need

Projects in which it is not appropriate to accommodate all users but may be appropriate to accommodate more than one user group should use the checklist to identify which users should be considered in the project design.



Projects Exempt from CEQA

Some complete streets projects may be exempt from the provisions of the California Environmental Quality Act. The following exemptions may apply:

- * ***Projects that are built within the existing right-of-way 15301(c)***
- * ***Re-striping projects (per Section 15282(j))***

If the project is exempt from CEQA further explanation and documentation is needed to comply with California law. The project sponsor should draft a memo describing why the project is exempt and file a notice of exemption.

CHECKLIST - General Project Information

		Date	
1. Project Title			Department Review Only Project #:
Project Description			
Project Location			

2. Contact Information

Implementing Agency			
Contact Person			
Phone		Fax	
Email			

3. Project Schedule (Circle Current Project Phase)

Project Milestone	Date Started/Anticipated End Date
Planning	
Preliminary Design	
Final Design	
Construction	

PHOTO

CHECKLIST - Existing Conditions

4. Existing Land Uses (check all that apply)

Residential	☐	Park/Open Space	☐
Mixed Use	☐	Visitor-Serving/Commercial	☐
Institutional/School	☐	Senior Housing	☐
Civic/Public Facilities	☐	Rural/Agricultural	☐

5. Safety (See Complete Streets Needs Assessment Matrix & <http://tims.berkeley.edu/>)

Are there perceived safety/speeding issues in the project area? ☐ Yes ☐ No

Is there a history of collisions in the project area?

☐ Pedestrian ☐ Bicyclist ☐ Motorist

6. Congestion

Does the roadway experience congestion? ☐ Yes ☐ No

If so, at what time(s) is it congested? ☐ AM Peak ☐ PM Peak

7. Existing Roadway Conditions/Context

Functional Classification

ROW Width Ft

Roadway Pavement Width Ft

of Lanes NB/EB: SB/WB:

2-Way Center Turn lane ☐ Yes ☐ No

Sidewalk Width Ft

Landscaping/Parking ☐ Yes ☐ No

Shoulder Width Ft

Bike Lane Width (<5') ☐ Yes ☐ No

Intersection(s) ☐ Signalized ☐ Unsignalized

Pavement Condition Poor Fair Good

Posted Speed Limit

Traffic Volumes (AADT)

Transit Route/Stops ☐ Yes ☐ No

Truck Route ☐ Yes ☐ No

CHECKLIST - Future Conditions

8. Future Roadway Conditions

Are there planned transportation & land use projects that could affect circulation in the project area?

☐

Yes

☐

No

If so, please list the project(s)

Are planned projects anticipated to increase travel demand in the area? (mark yes or no for each mode)

Car

☐

Yes

☐

No

Transit

☐

Yes

☐

No

Bicycle

Pedestrian

9. Stakeholder Outreach (check all that apply)

Please indicate which stakeholder groups provided input on project scope and design:

Neighborhood Group	☐	Bicycle Committees	☐
Business Association	☐	Pedestrian Committee	☐
School	☐	Senior Group	☐
Property Owners	☐	Transit Agency	☐
Environmental Group	☐	Transportation Disadvantaged	☐

Specific changes requested by stakeholders? ☐ Yes ☐ No

10. Circle the Complete Street Design Type - (See Table 2 of Guidebook)

Street Design Type

Main Street Avenue Boulevard Parkway

Local/Subdivision Street Rural Road

Local Collector Arterial

Functional Classification

Pedestrian/Bicycle-Oriented **Auto/Truck-Oriented**

11. Transportation Network Deficiencies (Refer to Existing Conditions)

Lacking/Insufficient Bicycle Facilities	☐	Lacking/Insufficient Transit Facilities	☐	Lacking/Insufficient Transit Service	☐
Lacking/Insufficient Pedestrian Facilities	☐	Insufficient accommodations for seniors	☐	Insufficient accommodations for disabled	☐
Bicycle/Pedestrian Connectivity	☐	Insufficient accommodations for students/youth	☐		

Given the Existing and Future Conditions the project area is a candidate for:

Road Diet (3 or more lanes; AADT<20,000; bicycle collisions)	☐ Yes	☐ No
Traffic Calming	☐ Yes	☐ No
Roundabout	☐ Yes	☐ No
Transit-Oriented Development/Transit Corridor (15 min headway)	☐ Yes	☐ No
Neighborhood Shared Street	☐ Yes	☐ No
Pedestrian Place	☐ Yes	☐ No
Transit/Bicycle/Pedestrian Prioritization at Intersections	☐ Yes	☐ No

CHECKLIST - Design

The purpose of this section is to ensure all users have been considered in the design of the project. Complete street design is context-sensitive and a complete street in a rural area may look different than one in an urban area. Refer to safety and special user needs identified in the existing and future conditions sections. The Monterey Bay Area Complete Streets Guidebook Chapter 5 contains design best-practices and sample accommodations for these users.

12. Pedestrian Design

Which, if any, of the following is provided or improved through the project design?

Minimize Driveways	☐ Yes	☐ Existing
Sidewalk/Path	☐ Yes	☐ Existing
Landscaping/Parking Buffer	☐ Yes	☐ Existing
ADA Access	☐ Yes	☐ Existing
Street Trees	☐ Yes	☐ Existing
Crossing Treatments	☐ Yes	☐ Existing
Traffic Calming	☐ Yes	☐ Existing
Wayfinding Signage	☐ Yes	☐ Existing
Audible Countdown	☐ Yes	☐ Existing
Other (Describe)		

13. Bicycle Design

Which, if any, of the following is provided or improved through the project design?

Bicycle Lanes	☐ Yes	☐ Existing
Shared-Lane Markings	☐ Yes	☐ Existing
Multiuse Path	☐ Yes	☐ Existing
Route/Wayfinding Signs	☐ Yes	☐ Existing
Bicycle Parking	☐ Yes	☐ Existing
Bicycle Detection	☐ Yes	☐ Existing
Bicycle Box	☐ Yes	☐ Existing
Color-Treated Bike	☐ Yes	☐ Existing
Floating Bike Lanes	☐ Yes	☐ Existing
Other (Describe)		

CHECKLIST - Design

14. Transit Design

Which, if any, of the following is provided or improved through the project design?

Priority Bus Lane	☐ Yes	☐ Existing
Bus Bulbs/Pull-Outs	☐ Yes	☐ Existing
Shelter	☐ Yes	☐ Existing
Real Time Bus Arrival Info	☐ Yes	☐ Existing
ITS/Signal Priority	☐ Yes	☐ Existing
Transit Service (15 min headways)	☐ Yes	☐ Existing
Wi-Fi	☐ Yes	☐ Existing
Stop/Station Amenities*	☐ Yes	☐ Existing
Other (Describe)		

* Transit Amenities include: Bench, lighting, trash can, route information/maps, concessions, music, and public art.

CHECKLIST - Trade-Offs & Exemptions

15. Project Trade-Offs

Is the recommended complete street cross section/design supportable?

☐

Yes

☐

No

If not, explain why:

Lack of ROW width

☐

Existing Structures

☐

Other

Trees/Environmental Features

☐

Insufficient Funding

☐

Other

Have alternative designs been considered?

☐

Yes

☐

No

What refinements to the cross section/needed were needed?

Removed/partial zones (Ch. 5) for :

Pedestrians

☐

Bicyclists

☐

Landscaping

☐

Vehicles

☐

Parking

☐
☐
☐
☐

Considered alternative routes/locations for

Pedestrians

☐

Bicyclists

☐

Landscaping

☐

Vehicles

☐

Parking

☐
☐
☐
☐

16. Exemptions (Refer to Ch. 6 of the Guidebook)

Is the project exempt from accommodating certain users?

☐

Yes

☐

No

Cost of accommodation is excessively disproportionate to the need or probable use?

☐

Yes

☐

No

Documented absence of current and future need?

☐

Yes

☐

No

Other

APPENDIX I: Questions to Support Six-Step Process

APPENDIX- QUESTIONS FOR SUPPORTING SIX-STEP PROCESS

Si x Steps

Step 1: Define the Existing and Future Land Use and Urban Design Context

- What does the area look like today?
- What are today's land use mixtures and densities?
- What are the typical building types, their scale, setbacks, urban design characteristics, relation to street, any special amenities, etc...?
- Are there any particular development pressures on the area (the nature of this may vary according to whether the area is a "greenfield" versus an infill area and this type of information is particularly important in the absence of an area plan)?
- What are the "functions" and the general circulation framework of the neighborhood and adjacent areas?
- Is there a detailed plan for the area?
- If so, what does the adopted, detailed plan envision for the future of the area?
- Does the plan make specific recommendations regarding densities, setbacks, urban design, etc.?
- Are there any other adopted development policies for the area?
- If so, what do those policies imply for the area?

Step 2: Define the Existing and Future Transportation Context

- What is the character of the existing street? How does the street currently relate to the adjacent land uses?
- How does the street currently function? What are the daily and hourly traffic volumes? Operating and posted speeds? What is the experience for pedestrians? Cyclists? Motorists?
- What are the current design features, including number of lanes, sidewalk availability, bicycle facilities, traffic control features, street trees, etc.?
- What, if any, transit services are provided? Where are the transit stops?
- What is the relationship between the street segment being analyzed and the surrounding network (streets, side walks, transit, and bicycle connections)?
- Are there any programmed or planned transportation projects in the area that would affect the street segment?
- Are there any other adopted transportation policies that would affect the classification of the street segment?

Step 3: Identify Deficiencies

- Gaps in the bicycle or pedestrian network near or along the street segment;
- Gaps in the bicycle or pedestrian network in the area (which may increase the need for facilities on the segment, because of the lack of alternative routes);
- Insufficient pedestrian or bicycle facilities (in poor repair, poorly lighted, or not well buffered from traffic, e.g.);
- Gaps in the overall street network (this includes the amount of connectivity in the area, as well as any obvious capacity issues on other segments in the area);
- Inconsistencies between the amount or type of transit service provided along the street segment and the types of facilities and/or land uses adjacent to the street;
- Inconsistencies between the existing land uses and the features of the existing or planned street network.

Step 4: Describe Future Objectives

- What existing policies might or should influence the specific objectives for the street?
- What conditions are expected to stay the same (or, more importantly, what conditions should stay the same)?
- Would the community and the stakeholders like the street and the neighborhood to stay the same or to change?
- Why and how would the community and the stakeholders like the street and the neighborhood to change?
- Given this, what conditions are likely to change as a result of classifying the street (exactly how will the street classification and design support the stakeholders' expectations)?

Step 5: Recommend Street Classification and Test Initial Cross-Section

- What is the recommended cross section?
- Is the cross section supportable considering:
 - * right-of way,
 - * Existing structures,
 - * Existing trees or other environmental features,
 - * Topography, and
 - * Location and number of driveways.

Step 6: Describe Tradeoffs and Select Cross-Section

- Where alternative design scenarios considered?
- What refinements to the cross section were needed ?
- What was the justification for selecting the final design scenario?

APPENDIX J: Economics of Complete Streets

Summary of Economics of Complete Streets

An important question about complete streets is, Are the benefits greater than the costs; are complete streets a good investment? The economic impact of transportation project is particularly important in an environment where regions are pursuing a variety of economic development strategies to improve the quality of life for residents and resources for transportation investments are scarce.

Careful evaluation of the benefits of costs can reveal some of the downstream effects complete streets have on economic activity. However, isolating the economic impacts of a concept as broad and indefinite as complete street makes simple conclusions difficult. The diversity of complete street types and specific implementations suggests a diversity of effects. Moreover, the effects depend on the development, market, and socioeconomic environment in which a complete street is implementing.

The White Paper on the Economics of Complete Streets presents a framework for evaluating the economic impacts of complete streets. The paper was prepared by ECONorthwest, a consulting firm specializing in economics, finance, and planning. ECONorthwest's findings recognize that complete streets are a relatively new concept and that attempts to rigorously evaluate their economic impacts are limited. ECONorthwest's research relies heavily on case studies rather than controlled time-series or cross-section studies. While case studies are excellent tools to confirm or challenge theory, to generalize their results into implementable policies comes with risk because one case study's conditions may or may not be comparable to another.

Approach to Evaluating Economic Benefits of Complete Streets

Transportation systems should aim to do an efficient job of getting people and goods to many desired places safely and quickly. The efficiency of the system is typically evaluated in terms of congestion. Although complete streets investments may address congestion, through managing demand and better use of the existing system, determining the economic impacts of complete streets must go beyond looking at its impacts on congestion. Furthermore, secondary economic impacts can result from transportation investments.

ECONorthwest groups complete street impacts by direct transportation impacts including: trip volume, trip duration, trip quality, safety and construction and maintenance cost, and indirect transportation impacts including: access to amenities, health, and transportation costs, in addition to congestion. ECONorthwest then evaluates the economic effect of the impacts relative to investments, business activity, property values, and government fiscal health.

The white paper notes several points important to the interpretation of its findings. Factors such as existing conditions, transportation geography, time period, perspectives, distribution of impacts, and exogenous trends should be considered when applying the economic framework. The transportation and non-transportation effects of complete streets depend on the details of how complete streets are designed and implemented and on the modes they attempt to influence.

Economic effects of Complete Streets

Given the transportation effects and the non-transportation effects of complete streets, what are the likely effects on economic activity (employment, output, value added, sales, payroll/income, and property values) when measured through investment, business activity, property values and fiscal impacts?

There are some good theoretical reasons for believing that complete streets can have positive effects on the regional or local economy. The limited literature suggests that, in some instances, measures of economic activity have changed with implementation of complete streets. Because the literature is limited, due to the limited empirical work on the

topic, the anecdotal nature of the work, little known about the distributional impacts it does not support unambiguous statements like, “If complete streets are built, the net economic effects will be x.”

Investment

Do the levels and composition of public and private investment change with the introduction of complete street?

Transportation investments play an important role in the redevelopment of a center or corridor. Some research suggests that complete street accompany increases in investment for an area. It is reasonable to presume that as a street’s safety, health, and amenities improve, private and public entities will be more willing to invest in the area. But complete street may be part of broader redevelopment efforts that included other public investments. Such investment makes it difficult to separate out the unique effects of complete streets. For instance, it is possible that decisions to invest in complete streets makes areas more competitive for the awarding of such development funds. On the other hand it may be true for any type of transportation project. Theory and case studies support the conclusion that complete street can be an important part of a public investment policy that can change the distribution of economic activity within a region.

Business Activity

Do measures of business activity (e.g., business creation, employments, wages/income, sales, revenues) change around complete streets? Do consumes spending patterns change because of complete streets?

Some instances of complete streets have led to more business activity around them. However, an increase of jobs and businesses after the implementation of complete streets does not, by itself, give any indication of how much of that increase is attributable to complete streets. For example, other market forces and location, the amount of new public investment, or pre-development losses such that any new development would have increased measures of business activity.

Consumption patterns could be impacted by a change in the total number of consumers, the cost of goods to consumers, and a change in land values as a result of complete streets. One should expect more economic activity the greater the density and better access. The number of consumers could increase due to potential growth in trip volumes and proximity. Although the number of consumers may increase due to a potential for a growth in trip volumes and proximity, cost of goods may decrease because the transportation cost to the consumer may decrease,



and the higher densities and land values may result in higher rents and higher prices, none of these factors are expected to be affected in a big way. It is unlikely that complete streets decrease consumption. Research reveals that non-motorized consumers are competitive consumers. Although case studies suggest that complete street-type policies may improve bottom lines, it is possible that these kinds of changes will be primarily distributional. A possible exception to the distribution issues is the case where more isolated cities in recreational areas could increase the regional economic activity if they can create “Main Street” environments that are attractive to tourists.

Property Values

Do property values change with the introduction of complete streets?

People choose to live in a certain area, in part, because of the amenities it offers. If people value the effects of complete streets they are more likely to choose to live in or near complete street areas. In the event that complete streets increase amenity and travel by non-auto modes, and do not decrease the effectiveness of the automobile too much, complete streets could be correlated with increased property values. However, even if traffic calming features reduce vehicle volume, several studies show property values still increase. The role of improving walkability on increasing property values is depending upon densities and destinations. For example, making a five-lane road servicing commercial strip complete and walkable may have little effect on walking, transit and auto travel, while making a desirable shopping district more walkable could raise property values.

Social engagement would also be increased if complete streets lead to more people use alternative modes of transportation and allowing users to interact more, which may also affect property values.

Increased property values would likely be a benefit to landowners, as their incomes would increase. Increased property values could be a cost to businesses and residents already operating and living there, as the increase could make the area unaffordable to them.

Government Fiscal Health

What is the net fiscal effect of complete streets on local governments and agencies?



In terms of revenues, while there are solid theoretical arguments and some empirical work for specific cases which explain why complete streets as a type of smart growth policy, could improve fiscal health due to increase sales tax, there is no way to tell that other factors aren't responsible for the increase in tax revenue and sales tax alone do not tell the story of fiscal health.

As a type of transportation investments, complete streets will involve expenditures in public and private funds. Complete streets may increase the up-front implementation costs since they may be above and beyond existing project design improvements. In a 2012 analysis, City of Charlotte Department of Transportation staff found that complete street components, specifically bike lanes and sidewalks, only slightly increase the cost of a project (on the order of 3-5%). In cases where complete street design elements replace larger automotive infrastructure requires, the cost may remain constant or decrease.

If complete streets cause users to shift away from cars, then complete streets could have some maintenance cost savings. However the savings may be minimal because heavy vehicles cause a disproportionate share of road wear. On the other hand, complete street may create a more complicated environment to maintain and higher standards for maintenance, which would generate a higher maintenance cost.

Effects of Health on Economic Growth

Complete streets design frequently incorporates some element of traffic calming which can reduce the number of collisions. Though the safety impacts are worth pursuing for their moral merits alone, reducing the number of deaths and injuries has tangible economic benefits. Given the documented potential for complete streets improvements to reduce the number and severity of crashes, it is possible that the safety benefits alone justify complete streets as a policy.

Beyond gains in safety, complete street could facilitate health improvements by increasing activity levels, and reducing noise. If complete streets contribute to healthier people, the economic benefits of that improved health could be measured as longer life expectancy, improved productivity and reduced costs for health care. Although, complete streets could improve health outcomes for some, it could worsen health outcomes for those who remain automotive users and are whose trip times could increase and for those who experience injuries, such as a sprained ankle from switching to other modes.

Economic Framework for Evaluating Complete Streets

Categories of Economic Activity	Direct and Non-Direct Transportation Impacts	Effect on Economic Activity			
		Possibly Negative	Possibly None	Possibly Positive	Possibly Very Positive
Business Activity	Access ¹				
Business Activity	Trip Volume				
Business Activity/ Investment	Trips Duration ²				
Fiscal Impact	Construction ³				
Fiscal Impact	Maintenance				
Property Values/ Investment	Amenities				
Economic Growth	Health ⁴				

Notes:

¹ New facilities for non-automobiles are likely to have a larger positive impact on economic activity than improving existing facilities.

² An increase in trip duration for automobiles may negatively impact economic activity, while a reduction in trip duration for non-automobiles may result in a positive impact on economic activity.

³ Construction of new facilities may have significant economic impacts, while adding new elements may have no to little economic impacts.

⁴ If complete streets contribute to healthier people by encouraging regular physical activity, Complete Streets could positively impact the economic activity by

APPENDIX K: Bicycle Facility Treatments

INTERSECTION TREATMENTS

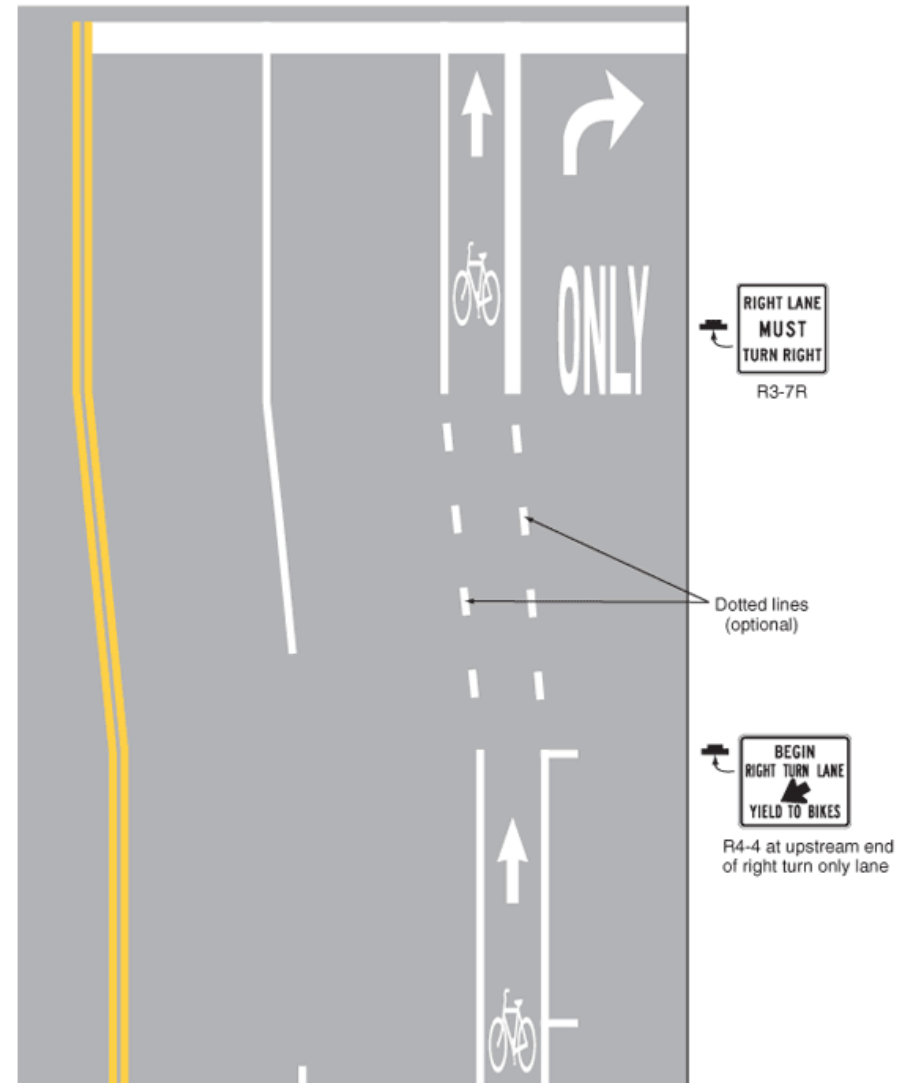


Bike Box



Bike Signal

Figure 9C-5. Example of Bicycle Lane Treatment at Parking Lane into a Right Turn Only Lane



Right Turn Lane Treatment, MUTCD

BICYCLE DETECTION



Video Camera



Inductive Loop

ROADWAY TREATMENTS



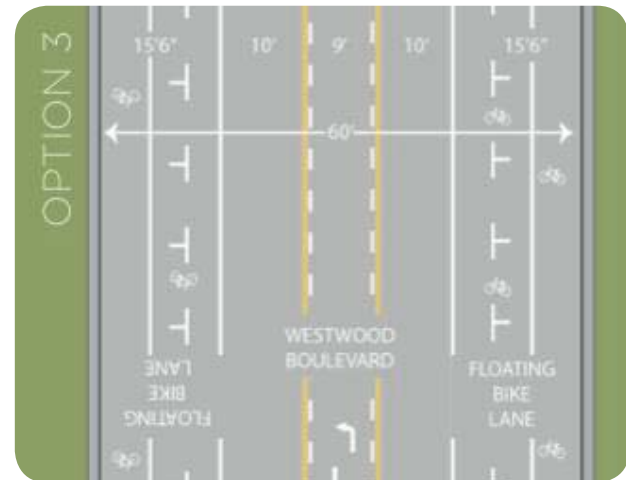
Green Lane



Buffered Bike Lane



Cycle Track



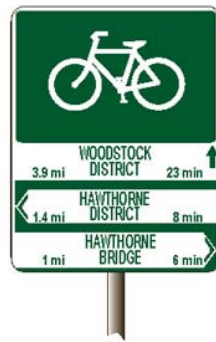
Floating Bike Lane

BICYCLE AMENITIES

Oakland, CA



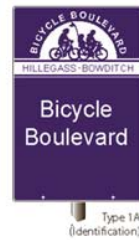
Portland, OR



San Francisco, CA



Berkeley, CA



Chicago, IL



Fix-it Station



Angled Parking



Wayfinding Signage

Racks on Transit





SCS Maps



Introduction

To better analyze land use patterns and consider scenario alternatives, AMBAG created a set of place types which established a set of land use designations common to general plans for the three counties and 18 cities in the region during the development of the 2045 MTP/SCS. These place type categories are meant to act as a common “language” so that the diverse general and specific plans across the Monterey Bay Area may be compared in a consistent and standard manner. Development of the place types began with a review of the predominant land uses and development patterns in the Monterey Bay region, leading to the creation of initial place type categories and a preliminary place type matrix. The following metrics and characteristics were established as the primary determinants of place type designations:

- Density – The general density of a particular land use, expressed as Floor to Area Ratio (FAR) and/or as dwelling units per acre
- Setting – The surrounding land use and development context
- Character – The urban and built form, including building placement, street pattern, and pedestrian or auto-orientation
- Transportation – The level of transit access, quality of the pedestrian environment, and presence of bicycle infrastructure

Based on these characteristics, a Place Type matrix was created and place type designation assignments were made. The Place Type Matrix was updated as part of the 2045 MTP/SCS. The assignment of place types was based primarily on existing land use designations, transit service maps and aerial imagery, but also relied upon information from local jurisdictions. The updated place type maps for 2020 and 2045 are included as an attachment to this Appendix.

As part of the development of the 2040 MTP/SCS, initial Opportunity Areas were identified in 2017 to connect land use patterns and supporting transportation projects. A set of Opportunity Areas were developed, designated as either “existing/planned” or “potential,” that help inform appropriate transportation investments and the identification of Transit Priority Projects (TPPs) in the AMBAG region. For more information on the creation and evaluation of the initial Opportunity Areas, please see Appendix I of the 2040 MTP/SCS.

Opportunity Areas are places in the region with the highest chance for successful sustainable growth in the future; they are generally located where Transit Priority Areas (TPAs) and Economic Development Areas (EDAs) within the AMBAG region overlap. This analysis defines a Transit Priority Area as a location that have both supportive land use densities and high quality transit service/connections. Economic Development Areas are locations that support future land use development opportunities, support a major employment center, and/or are areas with populations that would benefit from new economic opportunities. AMBAG worked with local jurisdictions to update the Opportunity Areas in the region for the 2045 MTP/SCS.

- Opportunity Areas designated as “existing/planned” were identified as both a TPA and an EDA.
- Opportunity Areas designated as “potential” were identified as either:
- A TPA or an EDA where the other designation may also possible to achieve, or
- Neither a TPA nor an EDA, but with a potential to become both a TPA and EDA in the future.

The updated Opportunity Areas for the 2045 MTP/SCS are shown in Table I-1.

Table I-1: Opportunity Areas

	Name	Notation	Existing/Planned or Potential
1	City of Scotts Valley, along Mt. Hermon Road and Scotts Valley Drive	SV-1	Potential
2	City of Santa Cruz, intersected by State Route (SR) 1 and Bay Street	SC-1	Potential
3	City of Santa Cruz, Downtown including Water Street and Soquel Avenue	SC-2	Existing/Planned
4	Santa Cruz County (Unincorporated), between north of SR 1 and Soquel Drive from Dominican Hospital perimeter to Capitola Avenue	SC-UN-1	Existing/Planned
5	City of Capitola, intersected by 41st Avenue and Capitola Road	CA-1	Existing/Planned
6	Santa Cruz County (Unincorporated), between north of SR 1 and Soquel Drive from Cabrillo College perimeter to Aptos Street	SC-UN-2	Existing/Planned
7	City of Watsonville, along Freedom Boulevard between Green Valley Road and Main Street	WA-1	Potential
8	City of Watsonville, along Main Street between Main Street/Freedom Boulevard intersection and Pajaro River	WA-2	Existing/Planned
9	City of San Juan Bautista, north of SR 156 bounded by Monterey Street, 2nd Street and The Alameda	SJB-1	Potential
10	City of Hollister, west of McCray Street between Santa Ana Road and Tres Pinos Road	HO-1	Potential
11	Monterey County (Unincorporated), south of SR 156 and bordered by a Census Designated Place boundary	MC-UN-1	Existing/Planned
12	City of Salinas, along N Main Street between E Boronda Road and Salinas Amtrak Station	SA-1	Existing/Planned
13	City of Salinas, along S Main Street between Salinas Amtrak Station and Blanco Road	SA-2	Existing/Planned
14	City of Salinas, along E Alisal Street east of US 101 to John Street	SA-3	Existing/Planned
15	City of Salinas, between E Boronda Road and City of Salinas limits	SA-4	Potential
16	City of Marina, along Reservation Road between Lake Drive and Salinas Avenue	MA-1	Existing/Planned
17	City of Marina, east of SR 1 bounded by Patton Parkway and Divarty Street, and including CSU Monterey Bay	MA-2	Potential

Table I-1: Opportunity Areas (continued)

	Name	Notation	Existing/Planned or Potential
18	City of Seaside, includes the City limits of Sand City and extends eastward	SE-1	Existing/Planned
19	City of Seaside, bounded by City limits of Seaside and Gigling Road, and including CSU Monterey Bay	SE-2	Potential
20	City of Monterey, along Fremont Street west of SR 1	MO-1	Existing/Planned
21	City of Monterey, from Municipal Wharfs 1 and 2 bounded by El Dorado Street, Camino El Estero and Larkin Street.	MO-2	Existing/Planned
22	City of Monterey, along Lighthouse Avenue bounded by David Avenue, Archer Street and Presidio of Monterey	MO-3	Existing/Planned
23	City of Pacific Grove, along Lighthouse Avenue bounded by David Avenue, Pine Avenue and Del Monte Boulevard	PG-1	Potential
24	City of Carmel By-The-Sea, bordered by 3rd Avenue, Torres Street, and Cassanova north of Ocean Avenue, and the City limits and 11th Street south of Ocean Avenue	CM-1	Potential
25	City of Gonzales, east of Alta Street bounded by 10th Street, Fanoie Road/Herold Parkway and Jersey Drive	GO-1	Potential
26	City of Soledad, east of US 101 and south of SR 146 bounded by East Street and the City limits	SO-1	Potential
27	City of Greenfield, west of US 101 boarded by Walnut Avenue, 12th Street and Elm Avenue	GR-1	Potential
28	City of King City, Canal Street, King Street, the City limits and Division Street	KC-1	Potential



Attachments

Urban Place Types

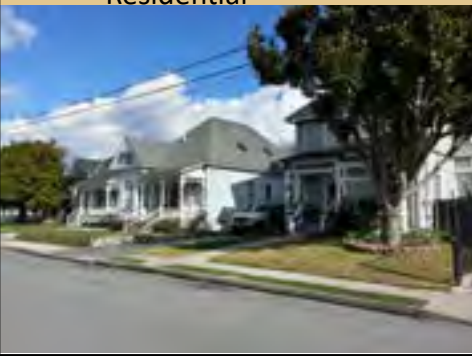
	Intensity	General Characteristics		Examples
		Land Use	Transportation	
U-1 Urban Single Family Residential 	Low to Medium Intensity (6 to 18 units per acre) Medium to High Intensity (15 to 25 units per acre)	Single family homes in close proximity to urban centers, typically laid out in a grid block pattern. Includes occasional duplexes, accessory units, and/or small multi-unit buildings. Compact development pattern with small lots, limited setbacks, and close proximity of structures.	Short blocks, grid street pattern, and proximity to destinations support non-motorized modes of transportation. Complete sidewalks and bicycle infrastructure typically present. Neighborhoods served by bus service with typical 30-minute headways; occasional proximity to multi-modal, regional, or intercity transit stations.	Chestnut Street, Santa Cruz Hellam Street, Monterey
U-2 Urban Multi-Family Residential 	Low to Medium Intensity (12 to 30 units per acre) Medium to High Intensity (25 to 50 units per acre)	Small and large apartment buildings, duplexes, accessory units, and limited single family homes in close proximity to urban centers. Well-integrated into the surrounding urban fabric. One- to five-story residential buildings on small to medium lots with minimal setbacks from property lines and adjacent structures. Building entrances typically oriented to the street.	Short blocks, grid street pattern, land-use diversity, and proximity of destinations support non-motorized modes of transportation. Complete sidewalks and bicycle infrastructure typically present. Neighborhoods served by bus service with typical 30-minute headways; occasional proximity to multi-modal, regional or intercity transit stations.	Clay Street, Monterey 3rd Street, Santa Cruz
U-3 Urban Commercial 	Low Intensity (FAR 1.0 or less)	A high concentration of retail, service, and office uses organized in a grid block pattern. A pedestrian-friendly environment supported by active ground floor building frontages, entrances oriented to the street, parking located to the rear of lots, and buildings placed at or near property lines.	Short blocks, grid street pattern, land-use diversity, and proximity of destinations support non-motorized modes of transportation. Wide sidewalks support pedestrian circulation; motorists frequently park once to visit multiple destinations. Multiple bus routes typically with 30-minute headways; occasional presence of multi-modal, regional or intercity transit stations.	Downtown Santa Cruz Downtown Monterey

U-4 Urban Mixed Use 	Medium to High Intensity (FAR greater than 2.0)	Commercial, office, and residential uses in medium- to large-scale buildings. Vertical mixed use with residential or office above ground floor retail is typical. A pedestrian-friendly environment supported by active ground floor building frontages, entrances oriented to the street, parking located to the rear of lots, and buildings placed at or near property lines.	High-quality pedestrian infrastructure supports pedestrian circulation. Short blocks, grid street pattern, land-use diversity, and proximity of destinations support non-motorized modes of transportation; motorists frequently park once to visit multiple destinations. Transit typically includes modest to robust bus service, with headways averaging 15 to 30 minutes.	Downtown Santa Cruz Downtown Monterey
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Suburban Place Types				
	Intensity	General Characteristics		Examples
		Land Use	Transportation	
S-1 Single Family Residential 	Low to Medium Intensity (3 to 10 units per acre) Medium to High Intensity (10 to 20 units per acre)	Single family homes in self-contained residential neighborhoods. One- to two-story buildings typically on 5,000 to 15,000 square foot lots with moderate to large setbacks. May include some accessory units.	Automobile-oriented with resident-serving local, collector, and occasionally arterial streets. Limited local transit service and park-and-ride lots. Sidewalks and bicycle facilities for recreational use.	Cliffwood Heights neighborhood, Capitola Deer Flats neighborhood, Monterey Hillcrest neighborhood, Hollister
S-2 Multi-Family Residential 	Low to Medium Intensity (10 to 25 units per acre) Medium to High Intensity (20 to 40 units per acre)	Duplexes, apartment complexes, subdivided houses, and mobile home parks in a generally low-density setting. Generally one- to four-story buildings on lots of varying sizes, often inward-oriented. May include some accessory units.	Automobile-oriented, most often found along collector or arterial streets. Limited local transit service and park-and-ride lots. Sidewalks and bicycle facilities for recreational use.	Bay Tree Apartments, Scotts Valley Caputo Court, Hollister Footprints on the Bay, Monterey

S-3 Neighborhood Commercial 	Low Intensity (FAR less than 0.5)	Stand-alone retail buildings, strip malls, local-serving big-box stores, and smaller-scale offices or office parks. Usually one story buildings occupying low proportion of total lot area; offices in some instances are multi-story. Typically set far back from street.	Automobile-oriented with large parking areas and limited pedestrian access; usually found along arterial streets. Limited local or, in rare instances, intercity transit service. Sidewalks and bicycle facilities usually absent or limited.	Forest Ave-Fairway Shopping Center, Pacific Grove McCray-Meridian Shopping Center, Hollister Kings Village Shopping Center, Scotts Valley
S-4 Regional Commercial 	Low Intensity (FAR less than 0.5) or occasionally Moderate Intensity (FAR 1.0 to 2.0)	Large-scale retail or entertainment uses with a regional draw including shopping malls, big-box stores, and tourist destinations. Most frequently occurs as large retail stores with substantial surrounding parking areas, but may also include more pedestrian-oriented or urban forms, especially for tourist destinations.	Automobile oriented, with most shoppers or visitors arriving by car; usually found along arterial streets or in core commercial areas. Transit access varies by setting, but in most instances includes only limited local or, in rare instances, intercity transit service. Except when located in core commercial areas, pedestrian and bicycle access and amenities tend to be limited or absent.	Capitola Mall Cannery Row, Monterey Airline Highway Shopping Center, Hollister Sand Dollar Shopping Center, Sand City
S-5 Employment Center 	Low to Medium Intensity (FAR from less than 1.0 to 2.0)	Office and research-oriented industrial land uses with medium to high employment densities. Buildings typically have low to moderate lot coverage; may have multiple stories or higher lot coverage. Suburban-style office parks, with multi-story office buildings and large parking lots are typical, as are stand-alone office buildings with surrounding parking.	Usually auto-oriented with large areas of surface parking, or occasionally parking garages. May in limited instances include internal pedestrian-oriented features. Transit service is reflective of surrounding place types, but is typically similar to other suburban place types, with limited service and frequency. Larger employment centers may feature private shuttle services.	Tres Pinos Road and Rancho Drive, Hollister Ryan Ranch Office Park, Monterey

S-6 Neighborhood Mixed Use		Medium Intensity (25 or more units per acre; FAR usually 2.0 or greater) Multi-family, mixed-use developments with ground-floor, neighborhood-serving retail, medical, office or mixed uses. Usually found in newly built traditional neighborhood developments or as infill along existing commercial corridors; may include some accessory units. Buildings usually have high lot-coverage, with no setbacks and pedestrian-oriented entrances directly fronting the street.	Pedestrian, bicycle, and transit oriented with bicycle parking, limited or tucked-away car parking, and pedestrian amenities. Transit service typically similar to other suburban place types, but with greater potential for increased transit service and facilities.	Capitola Beach Villas Greenfield Village
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Town Place Types				
	Intensity	General Characteristics		Examples
		Land Use	Transportation	
T-1 Town Single Family Residential 	Low to Medium Intensity (6 to 15 units per acre) Medium to High Intensity (12 to 25 units per acre)	Single family homes in close proximity to town centers or pedestrian-oriented commercial corridors, typically laid out in a grid block pattern. Includes some duplexes, accessory units, or small multi-unit buildings. Compact development pattern with small lots, limited setbacks, and close proximity of structures.	Short blocks, grid street pattern, and proximity to destinations support non-motorized modes of transportation. Complete sidewalks often present; bicycle infrastructure typically limited. Neighborhoods served by bus service with 30-minute or more headways; occasional proximity to regional or intercity transit service.	Jewel Box, Capitola Maple Street, Salinas 6th Street, Hollister
T-2 Town Multi-Family Residential 	Low to Medium Intensity (12 to 30 units per acre) Medium to High Intensity (25 to 50 units per acre)	Combination of apartment buildings, duplexes, accessory units, and some single family homes. Usually located in areas with traditional street patterns. One- to three-story residential buildings, typically with small setbacks from the street and property lines; may include accessory units.	Short blocks, grid street pattern, and proximity to destinations support non-motorized modes of transportation. Complete sidewalks often present; bicycle infrastructure typically limited. Neighborhoods served by bus service with 30-minute or more headways; occasional proximity to regional or intercity transit service.	Laine Street, New Monterey Neighborhood East Riverside Drive, Watsonville

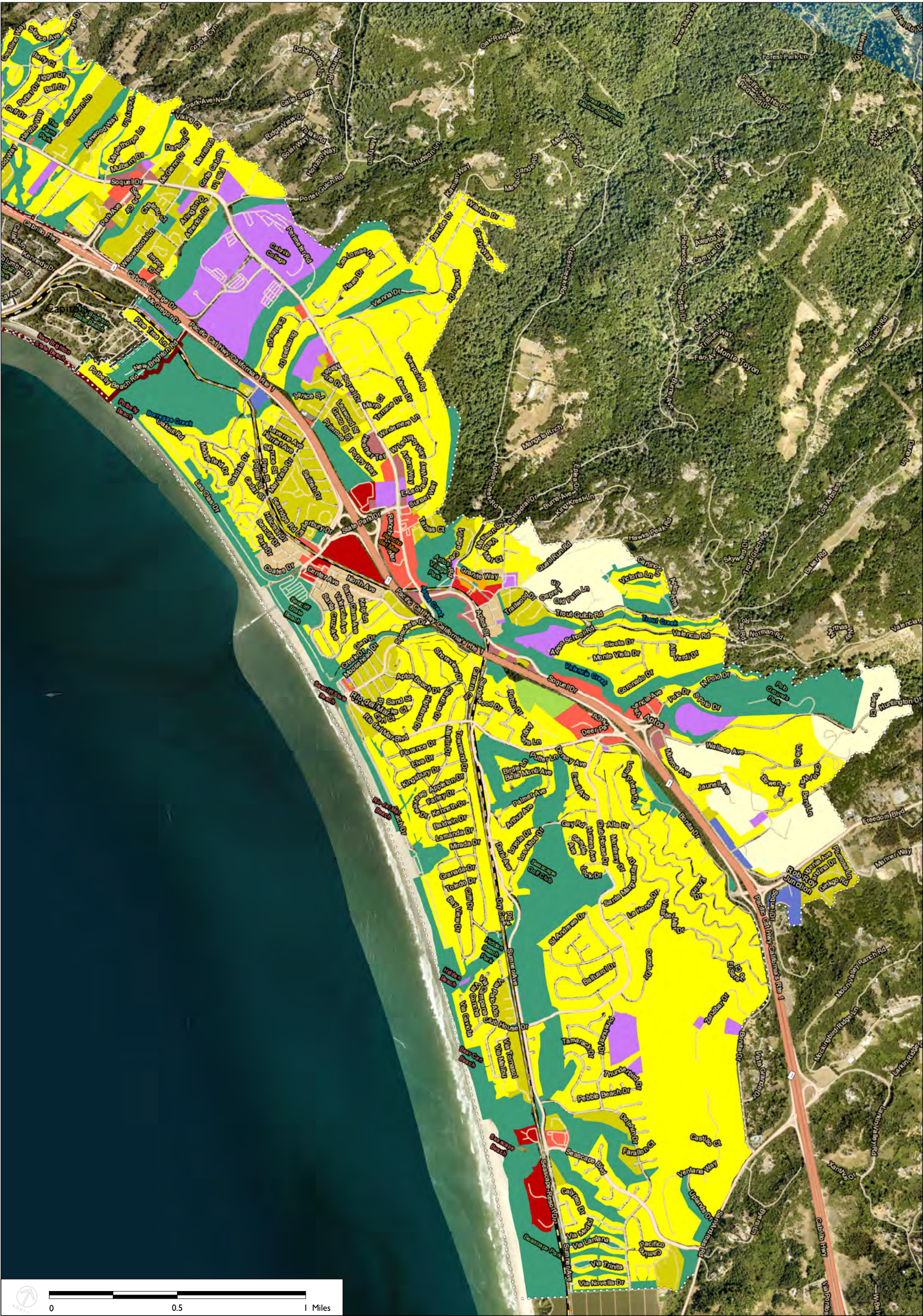
T-3 Town Commercial 	Low intensity (FAR 1.0 or less)	Pedestrian-oriented commercial uses in town core commercial areas or along commercial corridors. Usually in areas with traditional street patterns. One-story buildings, often with no setbacks and sometimes with full lot coverage. Entrances usually face the street. Lots occasionally include parking, usually located at rear.	Short blocks, grid street pattern, and nearby residential uses support non-motorized modes of transportation. Complete sidewalks often present; bicycle infrastructure typically limited. Transit typically includes limited local service, with headways as short as 30 minutes. Many visitors arrive by car, particularly when traveling long distances.	Bay and Mission Street, Santa Cruz Downtown Carmel
T-4 Town Mixed Use 	Low to Medium Intensity (FAR 1.0 to 3.0)	Small-scale, mixed-use buildings typically in core commercial areas or along commercial corridors. Usually in areas with traditional street patterns. Vertical mixed use buildings common with residential and office above ground-floor commercial. Buildings typically built to property lines; parking may be included, usually to the rear of buildings. May include accessory units.	Short blocks, grid street pattern, and nearby residential uses support non-motorized modes of transportation. Complete sidewalks often present; bicycle infrastructure typically limited. Transit typically includes limited local service, with headways as short as 30 minutes. Many visitors arrive by car, particularly when traveling long distances.	Capitola Village 5th Street, Hollister Lighthouse Avenue, Pacific Grove

Non-Urban Place Types				
	Intensity	General Characteristics		Examples
		Land Use	Transportation	
NU-1 Agriculture 	Very Low Intensity (1 unit per acre or less)	Isolated single family homes, farm houses, and other agriculture-related structures in an agricultural or rural setting; may include farmworker housing. Various building heights and sizes, frequently 2-stories or less, often with expansive setbacks from roads and property lines.	Automobile dependent with widely-spaced, generally rectilinear road patterns. Transit absent or restricted to limited and infrequent regional or inter-city service. Sidewalks and other pedestrian/bicycle infrastructure usually absent.	Outlying portions of Greenfield Outlying portions of San Juan Bautista

NU-2 Rural-Town Commercial 	Low Intensity (FAR usually less than 1.0, up to 2.0 in rare instances)	Variety of small commercial buildings usually located in centers of compact, rural towns. Buildings usually one-story with parking at front or rear. In some cases may not include parking and may include second story with upstairs use.	Mixture of pedestrian- and automobile-oriented. Short blocks, grid street pattern, and nearby residential uses support non-motorized modes of transportation; however, cars may be more commonly used, especially by visitors traveling regionally. Transit absent or restricted to limited and/or infrequent regional or inter-city service. Sidewalks generally present, but may be absent in some cases. Dedicated bicycle infrastructure usually absent.	3rd Street, San Juan Bautista Merritt Street, Castroville Alta Street, Gonzales
NU-3 Rural-Town Residential 	Low Intensity (3 to 8 units per acre)	Single family homes in areas with grid street patterns; close proximity to central areas of compact, rural towns. May include-small multi-family buildings such as duplexes or homes with accessory units. One- or two-story buildings on small- to medium-sized lots. Homes have variable setbacks from property lines and other buildings.	Short blocks, grid street pattern, and proximity to local destinations support non-motorized modes of transportation for intracity trips; however, cars may be more commonly used, especially for regional trips. Transit absent or restricted to limited and infrequent regional or inter-city service. Sidewalks may be absent, but generally low traffic may promote non-motorized transportation. Dedicated bicycle infrastructure usually absent.	6th Street, San Juan Bautista Scott Street, Chualar 9th Street, Gonzales
NU-4 Exurban and Rural Residential 	Very Low to Low Intensity (usually 1 unit per acre or less, on rare occasions up to 6 units per acre)	Single family homes located in neighborhoods on urban fringe. Frequently characterized by non-grid street patterns and relatively long distances to noncontiguous urban or town centers. One or two story buildings on large lots with deep setbacks; may include accessory units. In rare instances may include smaller “suburban” style lots located far from central areas of towns or cities.	Automobile oriented, often with long distances separating different land uses. Non-grid, typically low-connectivity street patterns discourage non-motirized transportation for non-recreational trips. Transit absent or restricted to limited and infrequent express or regional service; park-and-rides occasionally present. Sidewalks and dedicated bike paths typically for recreational use.	Pasadera Neighborhood, Monterey Fairview Road, Hollister Crescent Drive, Scotts Valley

Other Place Types

	Intensity	General Characteristics		Examples
		Land Use	Transportation	
IND Industrial and Manufacturing 	Various Intensities (FAR from less than 1.0 to 4.0 or higher)	Various industrial and manufacturing uses, including factories, storage facilities, industrial and commercial suppliers, and some research and development uses. Street patterns and building forms vary, ranging from traditional blocks and pedestrian-oriented configurations to isolated facilities inaccessible by non-motorized transportation.	Transportation characteristics vary, with both pedestrian- and auto-oriented development patterns Availability of transit, pedestrian access, and bicycle infrastructure vary depending upon setting.	Industrial Drive, Hollister Los Coches Road, Soledad Estates Drive, Aptos
AT Airport 	N/A	Airports.	Transportation characteristics vary.	Monterey Peninsula Airport Hollister Municipal Airport
INS Institutional 	Various Intensities (FAR from less than 1.0 to 4.0 or higher)	Various institutional, civic, public, educational, hospital, cemeteries, and utilities uses located in various settings. Built forms vary by specific use and location. May include group quarters, student housing, or accessory units.	Transportation characteristics vary, with both pedestrian- and auto-oriented development patterns Availability of transit, pedestrian access, and bicycle infrastructure are all variable, depending upon setting.	UC Santa Cruz Salinas High School Public Libraries Wastewater Treatment Plants
OSR Open Space / Recreation 	N/A	Open space and recreational uses, including local and regional parks, nature preserves, and beaches.	Transit characteristics highly variable. Isolated regional parks or wilderness areas may lack transit connections and pedestrian/bicycle access. Parks in urban centers may have frequent transit service and complete bicycle/pedestrian infrastructure.	Village Green, Greenfield Ramsay Park, Watsonville Calaveras Park, Hollister



Source data: AMBAG, 2022

2020 URBAN APTOS PLANNING AREA PLACE TYPES

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial
- S-5 Employment Center

Town Place Types

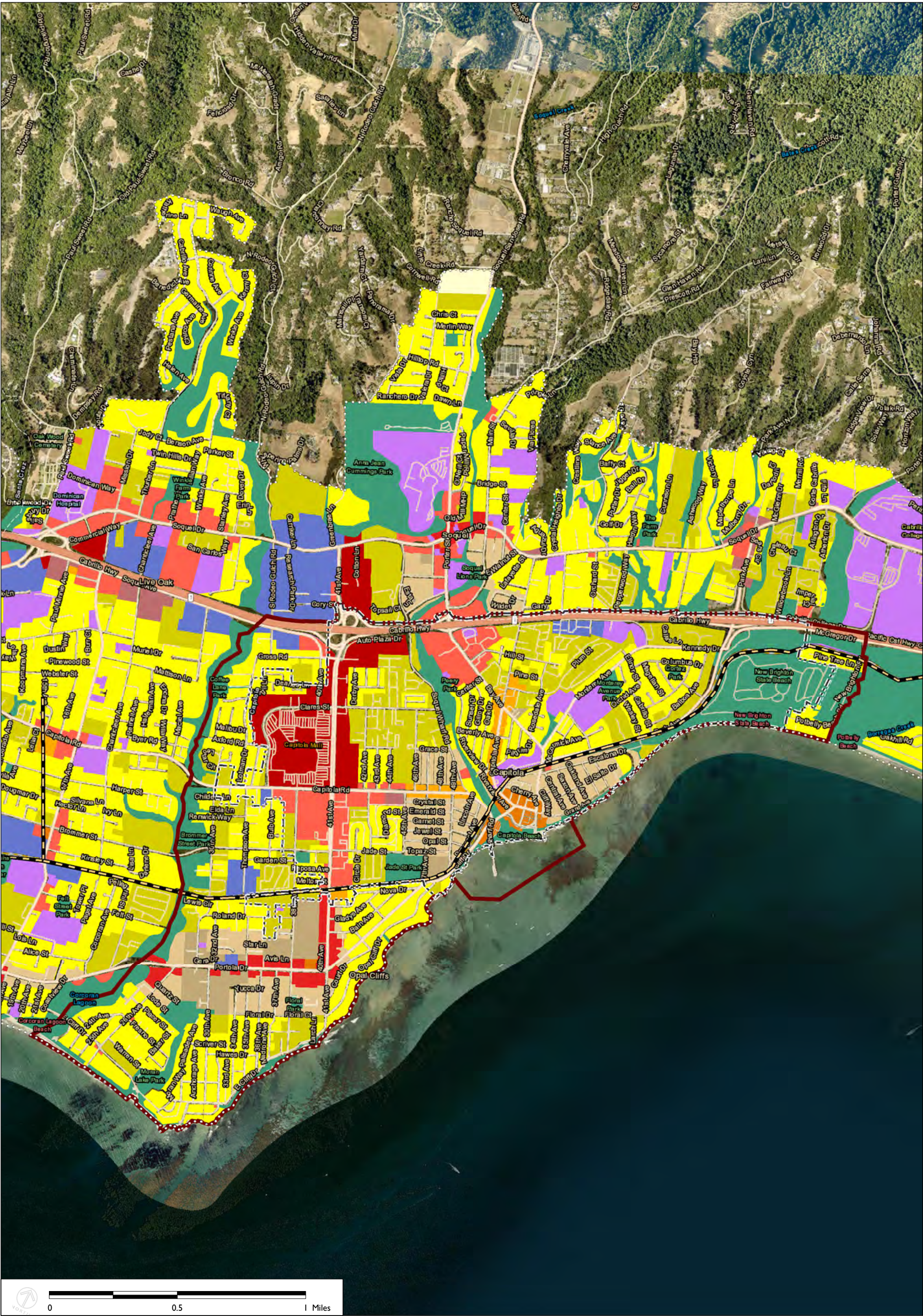
- T-1 Town Single-Family Residential
- T-2 Town Multi-Family Residential
- T-3 Town Commercial

Non-Urban Place Types

- NU-1 Agriculture
- NU-4 Exurban and Rural Residential
- Other
 - IND Industrial/Manufacturing
 - INS Institutional/Civic
 - OSR Open Space/Recreational

- Sphere of Influence
- City Limits
- Urban Service Boundary
- Railroads

APTOS URBAN AREA
2020 BASELINE
INCLUDES ADJACENT
INCORPORATED URBAN AREAS



Source data: AMBAG, 2022

2020 CAPITOLA, LIVE OAK, AND SOQUEL PLACE TYPES

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial

Town Place Types

- T-1 Town Single-Family Residential
- T-2 Town Multi-Family Residential

Other

- IND Industrial/Manufacturing
- INS Institutional/Civic
- OSR Open Space/Recreational

Town Commercial

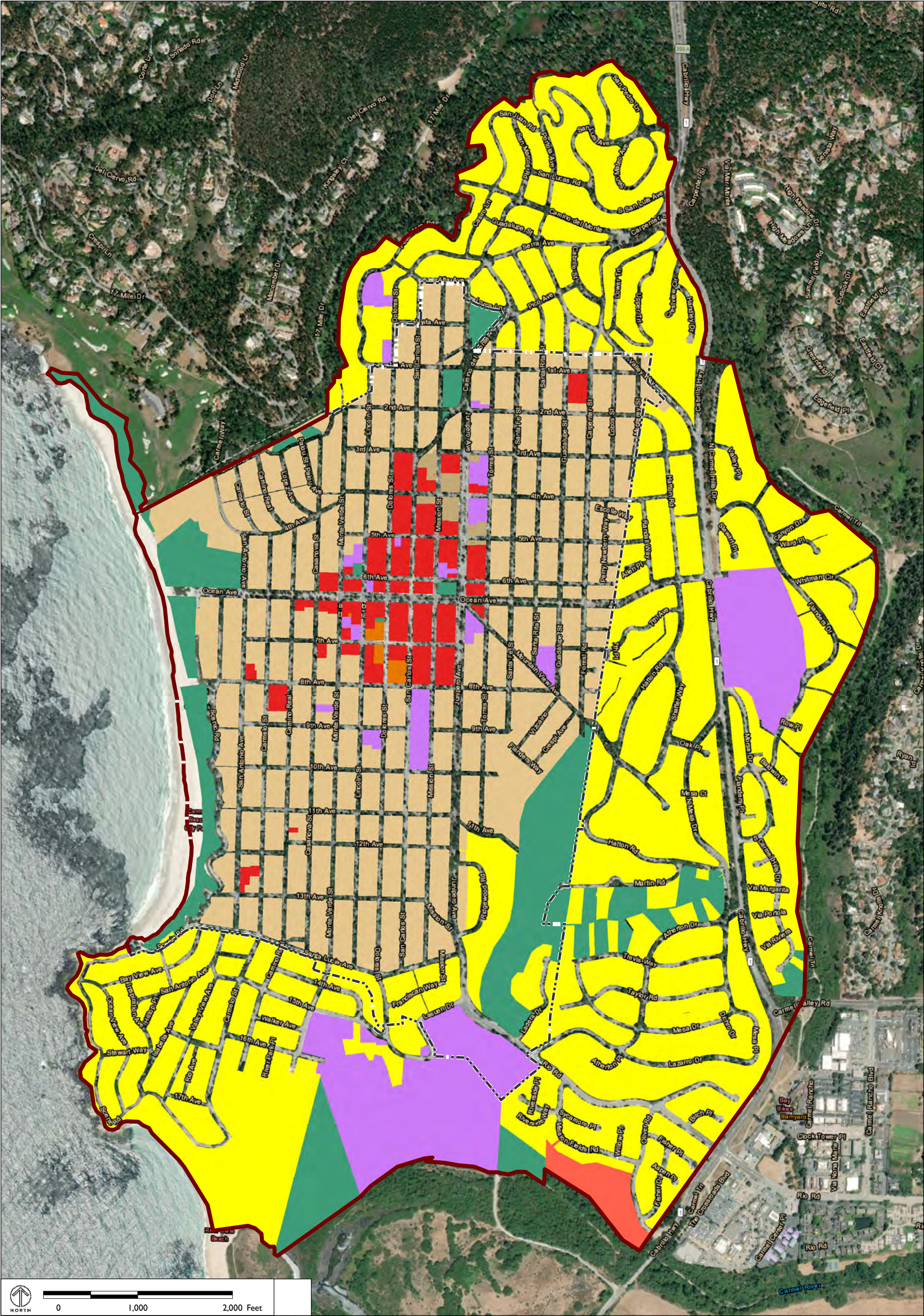
- T-3 Town Commercial
- T-4 Town Mixed Use

Urban Service Boundary

- Sphere of Influence
- City Limits
- Railroads

CAPITOLA, LIVE OAK, AND SOQUEL

2020 BASELINE
INCLUDES SURROUNDING
UNINCORPORATED URBAN AREAS



Source data: AMBAG, 2022

2020 CARMEL PLACE TYPES

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-3 Neighborhood Commercial

Town Place Types

- T-1 Town Single-Family Residential
- T-2 Town Multi-Family Residential

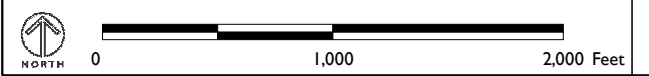
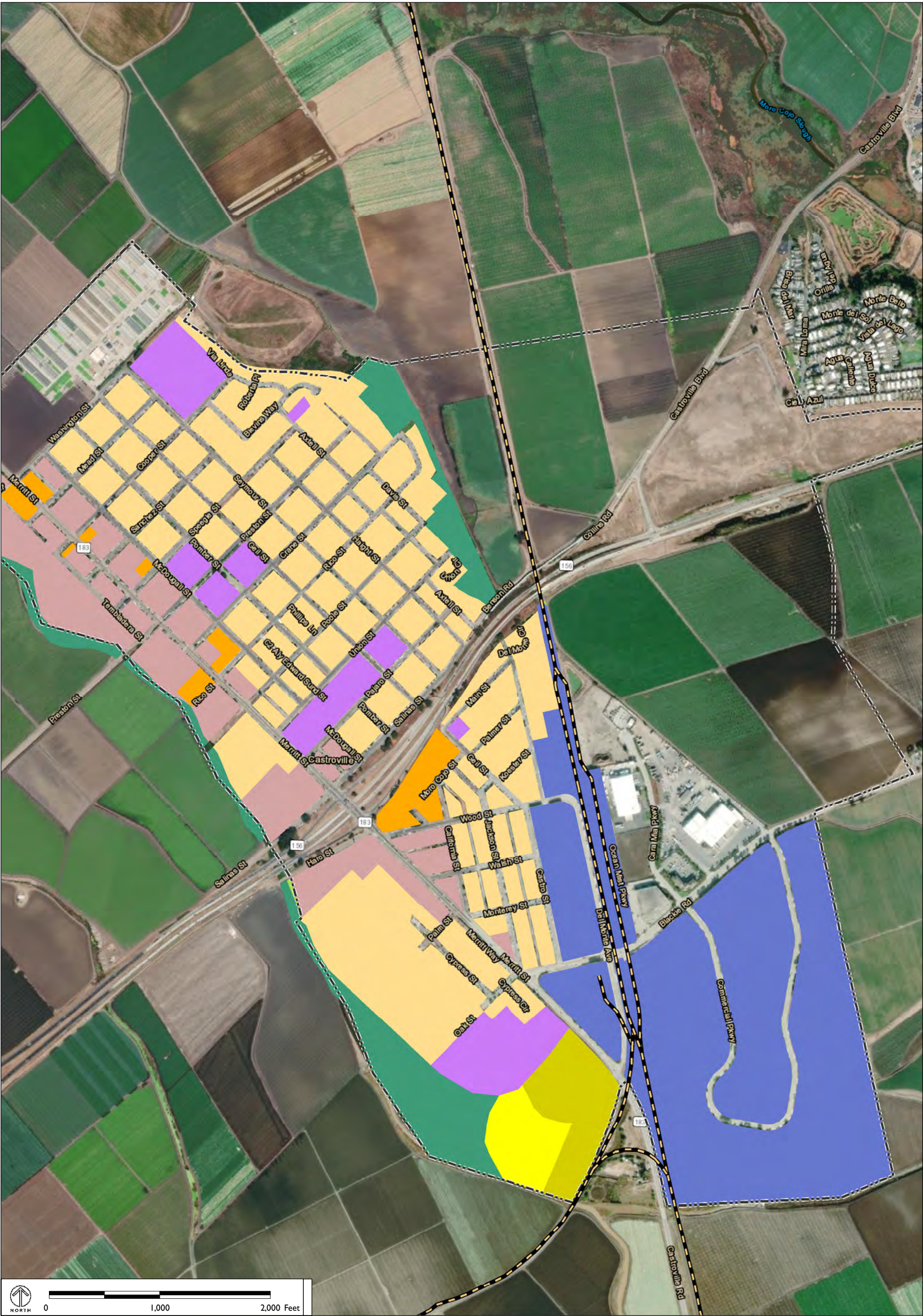
- T-3 Town Commercial
- T-4 Town Mixed Use

Other

- INS Institutional/Civic
- OSR Open Space/Recreational

- City Limits
- Sphere of Influence

CARMEL
2020 BASELINE



Source data:AMBAG, 2022

2020 CASTROVILLE PLACE TYPES

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential
- S-6 Neighborhood Mixed Use

Non-Urban Place Types

- NU-1 Agriculture

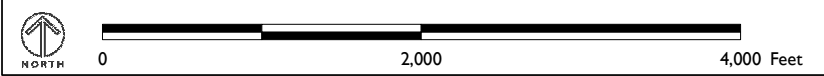
- NU-2 Rural Town Commercial
- NU-3 Rural Town Residential

Other

- IND Industrial/Manufacturing
- INS Institutional/Civic
- OSR Open Space/Recreational

- Community Area
- Railroads

CASTROVILLE
2020 BASELINE



Source data: AMBAG, 2022

2020 CHUALAR PLACE TYPES

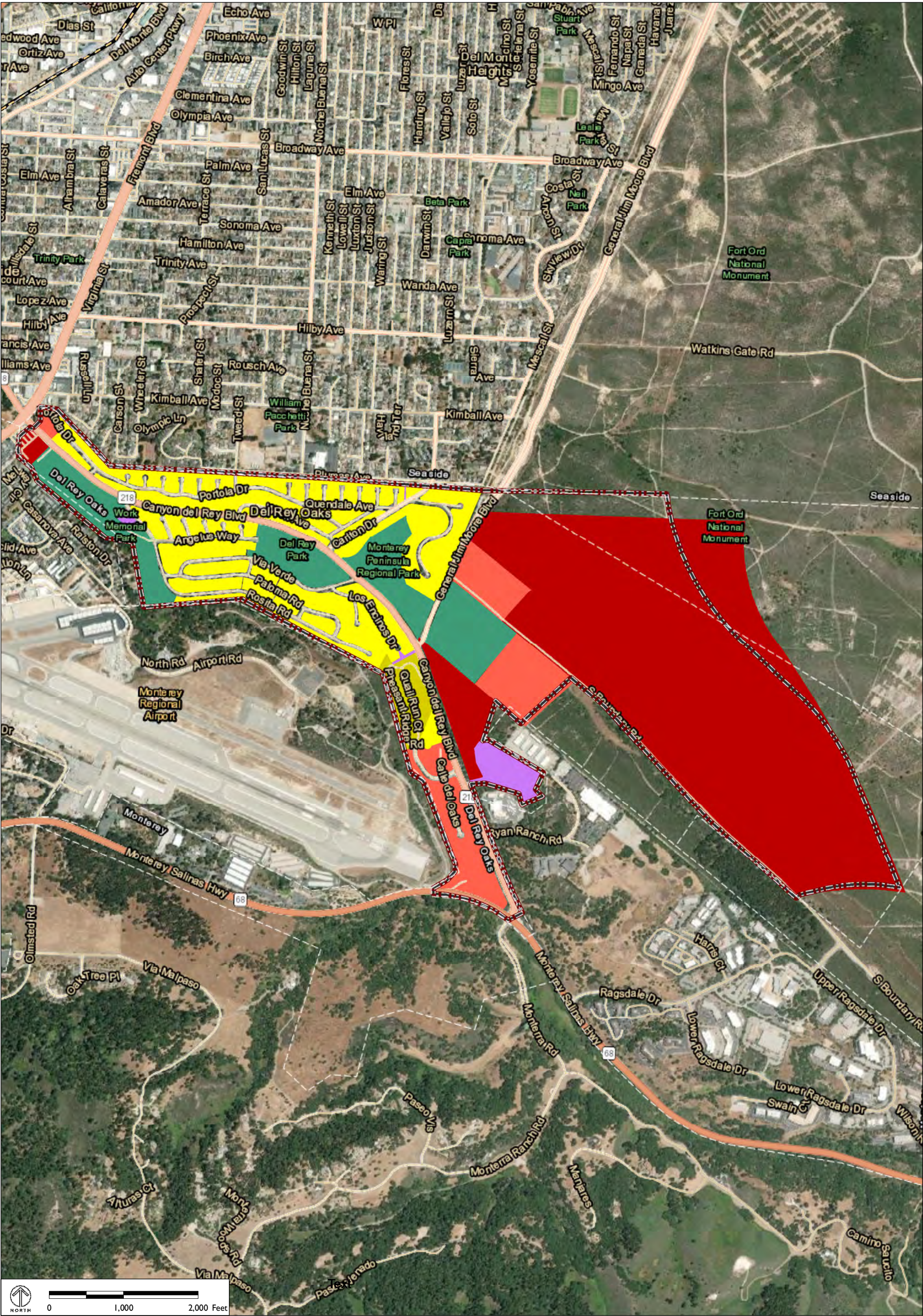
Non-Urban Place Types

- NU-1 Agriculture
- NU-2 Rural Town Commercial
- NU-3 Rural Town Residential

Other

- INS Institutional/Civic

- Census Designated Place
- Railroads



Source data:AMBAG, 2022

2020 DEL REY OAKS PLACE TYPES

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial

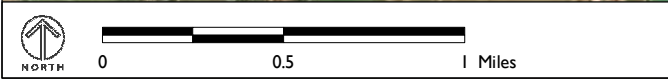
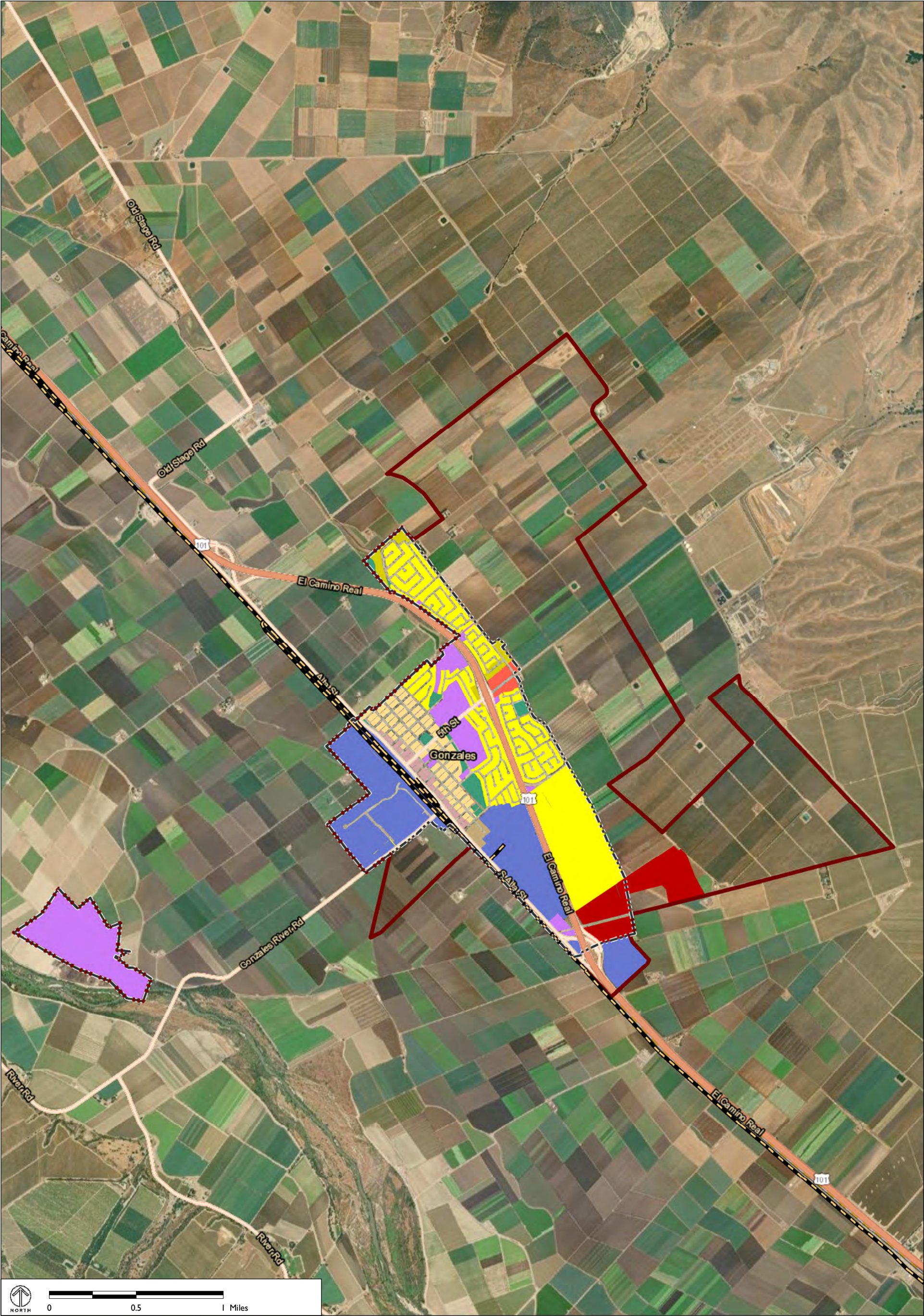
Other

- INS Institutional/Civic
- OSR Open Space/Recreational

S-6 Neighborhood Mixed Use

- City Limits
- Sphere of Influence
- Railroads

DEL REY OAKS
2020 BASELINE



Source data:AMBAG, 2022

2020 GONZALES PLACE TYPES

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial

Town Place Types

- T-1 Town Single-Family Residential
- T-2 Town Multi-Family Residential

Non-Urban Place Types

- NU-2 Rural Town Commercial

Other

- IND Industrial/Manufacturing
- INS Institutional/Civic
- OSR Open Space/Recreational

- NU-3 Rural Town Residential



City Limits

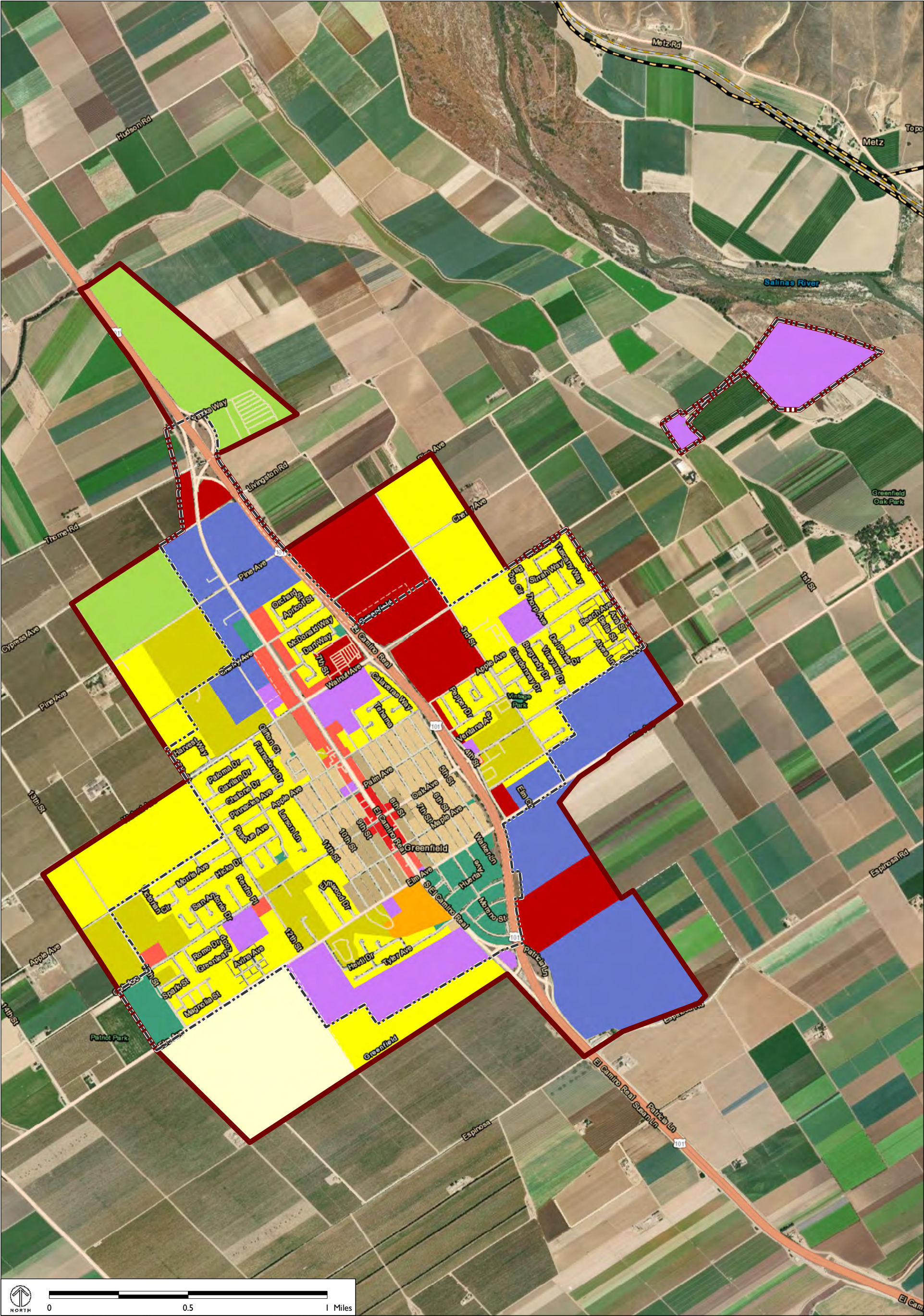


Sphere of Influence



Railroads

GONZALES
2020 BASELINE



Source data:AMBAG, 2022

2020 GREENFIELD PLACE TYPES

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial
- S-6 Neighborhood Mixed Use

Town Place Types

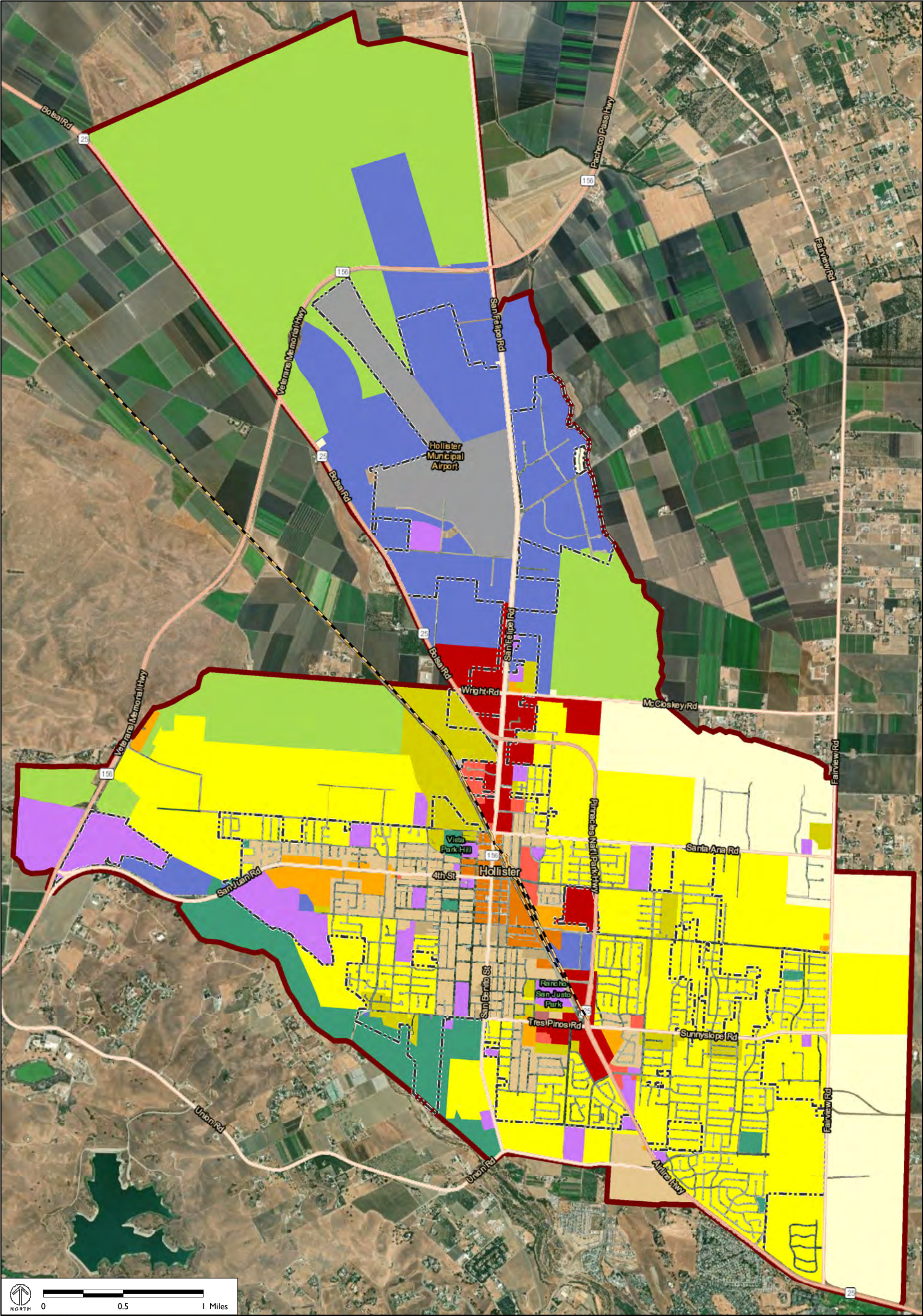
- T-1 Town Single-Family Residential
- T-2 Town Multi-Family Residential
- T-3 Town Commercial

Non-Urban Place Types

- NU-1 Agriculture

- NU-4 Exurban and Rural Residential
- Other
 - IND Industrial/Manufacturing
 - INS Institutional/Civic
 - OSR Open Space/Recreational
 - Airport

- City Limits
- Sphere of Influence
- Railroads



Source data: AMBAG, 2022

2020 HOLLISTER PLACE TYPES

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial
- S-5 Employment Center

Town Place Types

- S-6 Neighborhood Mixed Use
- T-1 Town Single-Family Residential
- T-2 Town Multi-Family Residential
- T-4 Town Mixed Use

Non-Urban Place Types

- NU-1 Agriculture

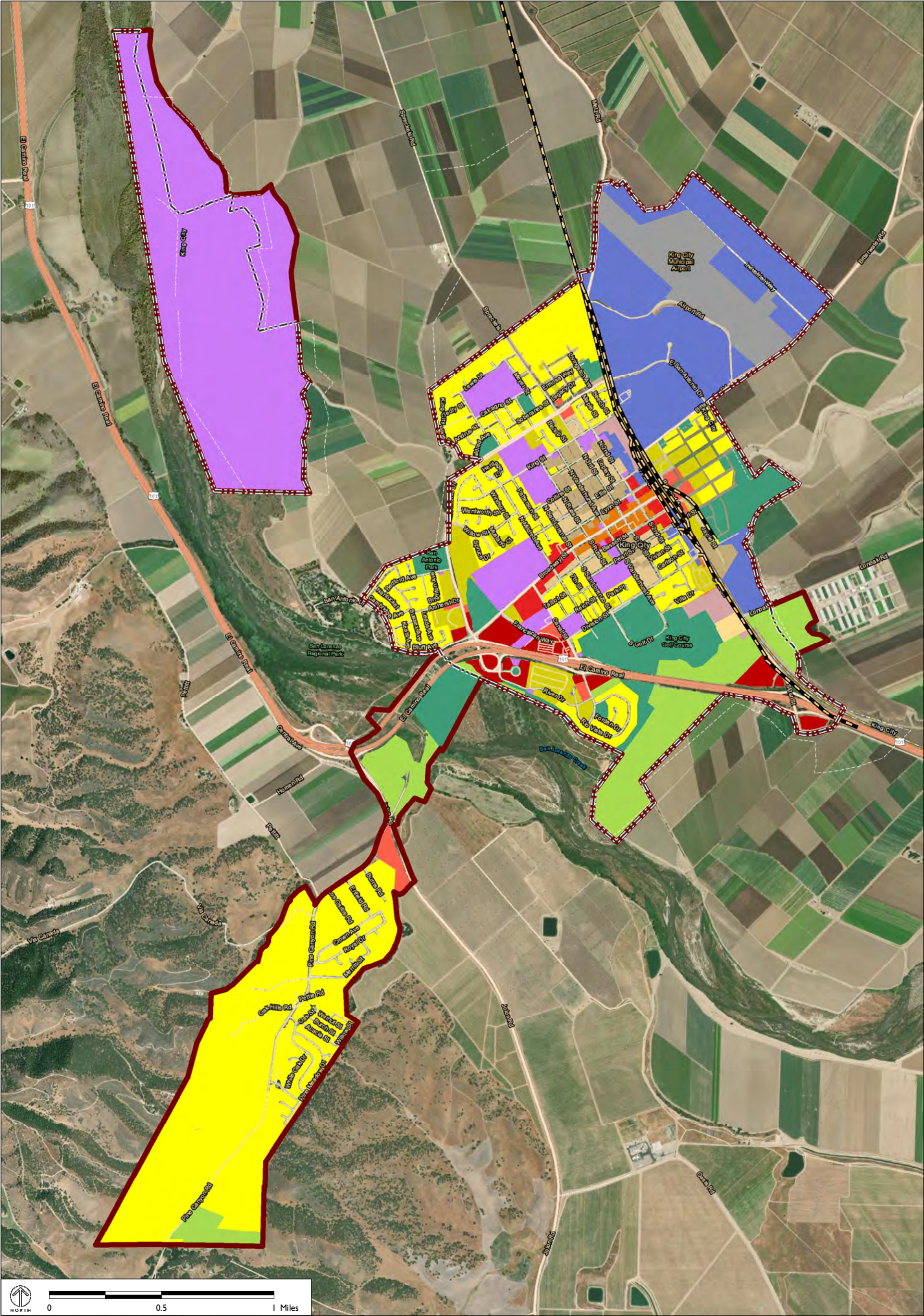
Other

- IND Industrial/Manufacturing
- AT Airport
- INS Institutional/Civic
- OSR Open Space/Recreational

NU-4 Exurban and Rural Residential

City Limits

- Sphere of Influence
- Railroads



Source data:AMBAG, 2022

2020 KING CITY PLACE TYPES

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial

Town Place Types

- T-1 Town Single-Family Residential

- T-2 Town Multi-Family Residential
- T-3 Town Commercial

- T-4 Town Mixed Use

Non-Urban Place Types

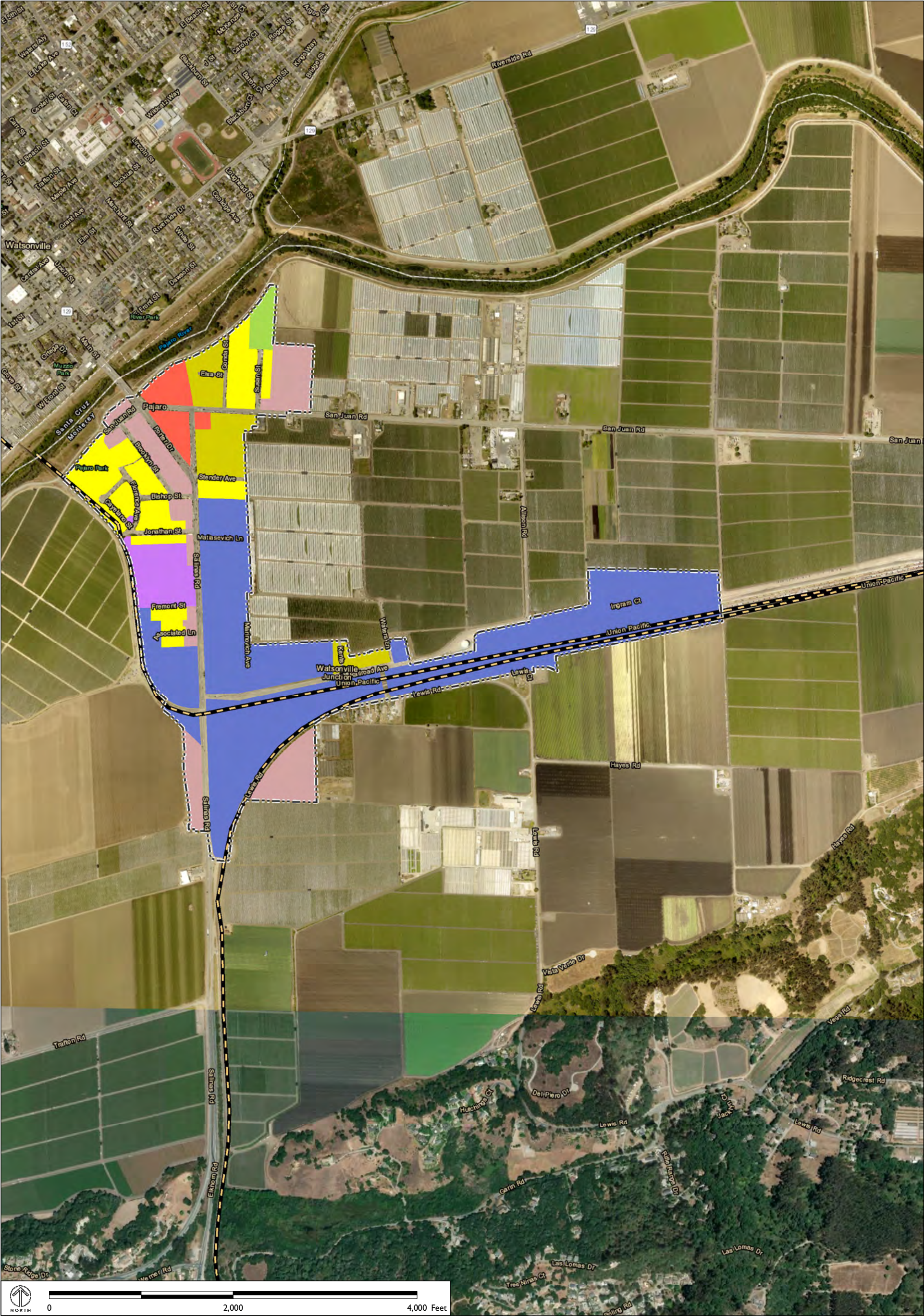
- NU-1 Agriculture
- NU-2 Rural Town Commercial

- NU-3 Rural Town Residential

Other

- IND Industrial/Manufacturing
- AT Airport
- INS Institutional/Civic
- OSR Open Space/Recreational

- City Limits
- Sphere of Influence
- Railroads



Source data:AMBAG, 2022

2020 PAJARO PLACE TYPES

Suburban Place Types

- S-1 Single-Family Residential
- S-2 Multi-Family Residential
- S-3 Neighborhood Commercial

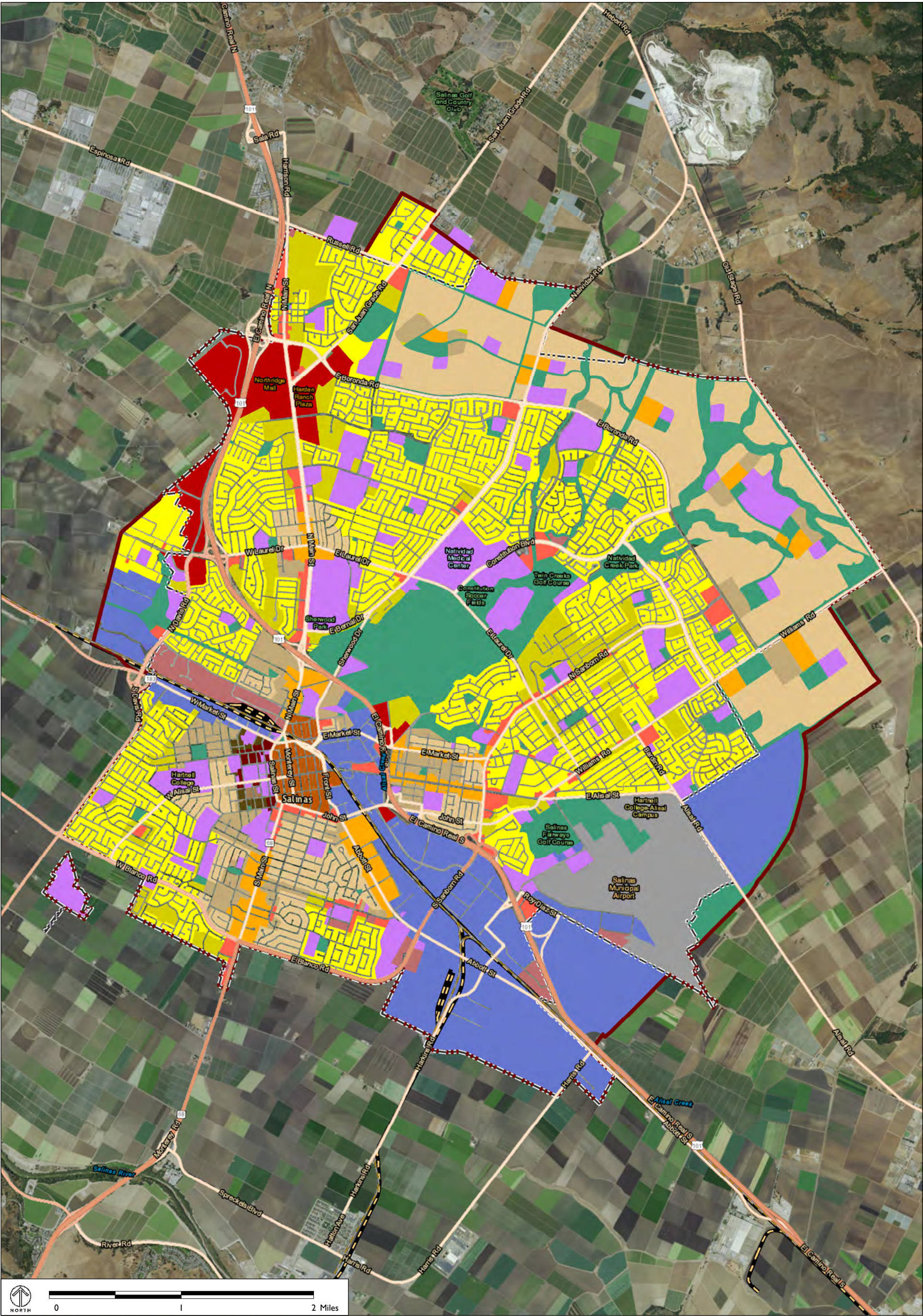
Non-Urban Place Types

- NU-1 Agriculture
- NU-2 Rural Town Commercial

Other

- IND Industrial/Manufacturing
- INS Institutional/Civic

- Community Area
- Railroads



Source data:AMBAG, 2022

2020 BASELINE SALINAS PLACE TYPES

Urban Place Types

- U-1 Single-Family Residential
- U-2 Multi-Family Residential
- U-3 Urban Commercial
- U-4 Urban Mixed Use

Suburban Place Types

- S-1 Single-Family Residential
- S-2 Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial
- S-5 Employment Center

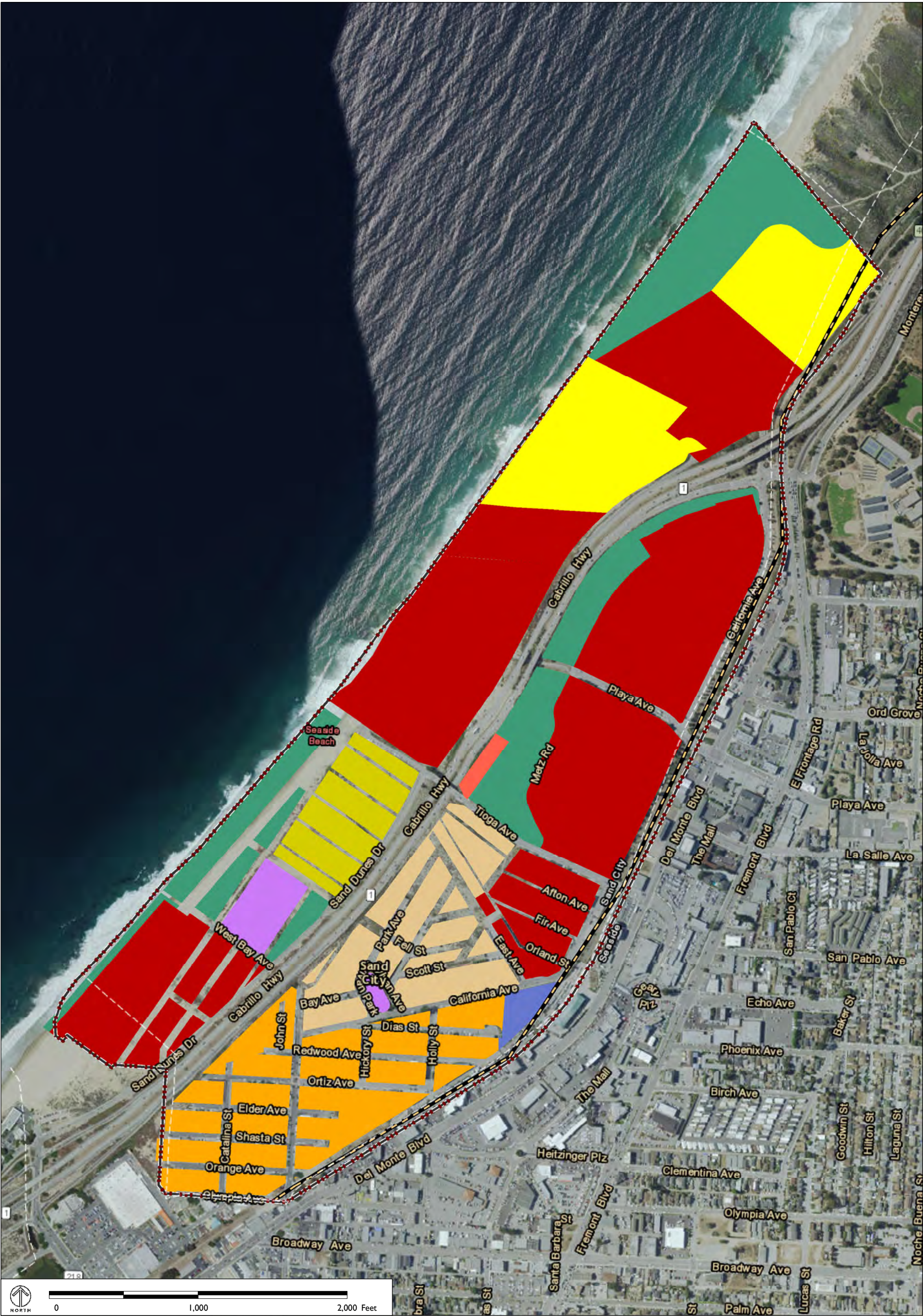
Town Place Types

- T-1 Single-Family Residential
- T-2 Multi-Family Residential
- T-3 Town Commercial
- T-4 Town Mixed Use

Other

- IND Industrial/Manufacturing
- AT Airport
- INS Institutional/Civic
- OSR Open Space/Recreational

- City Limits
- Sphere of Influence
- Railroads



Source data:AMBAG, 2022

2020 BASELINE SAND CITY PLACE TYPES

Suburban Place Types

- S-1 Single-Family Residential
- S-2 Multi-Family Residential
- S-3 Neighborhood Commercial

Town Place Types

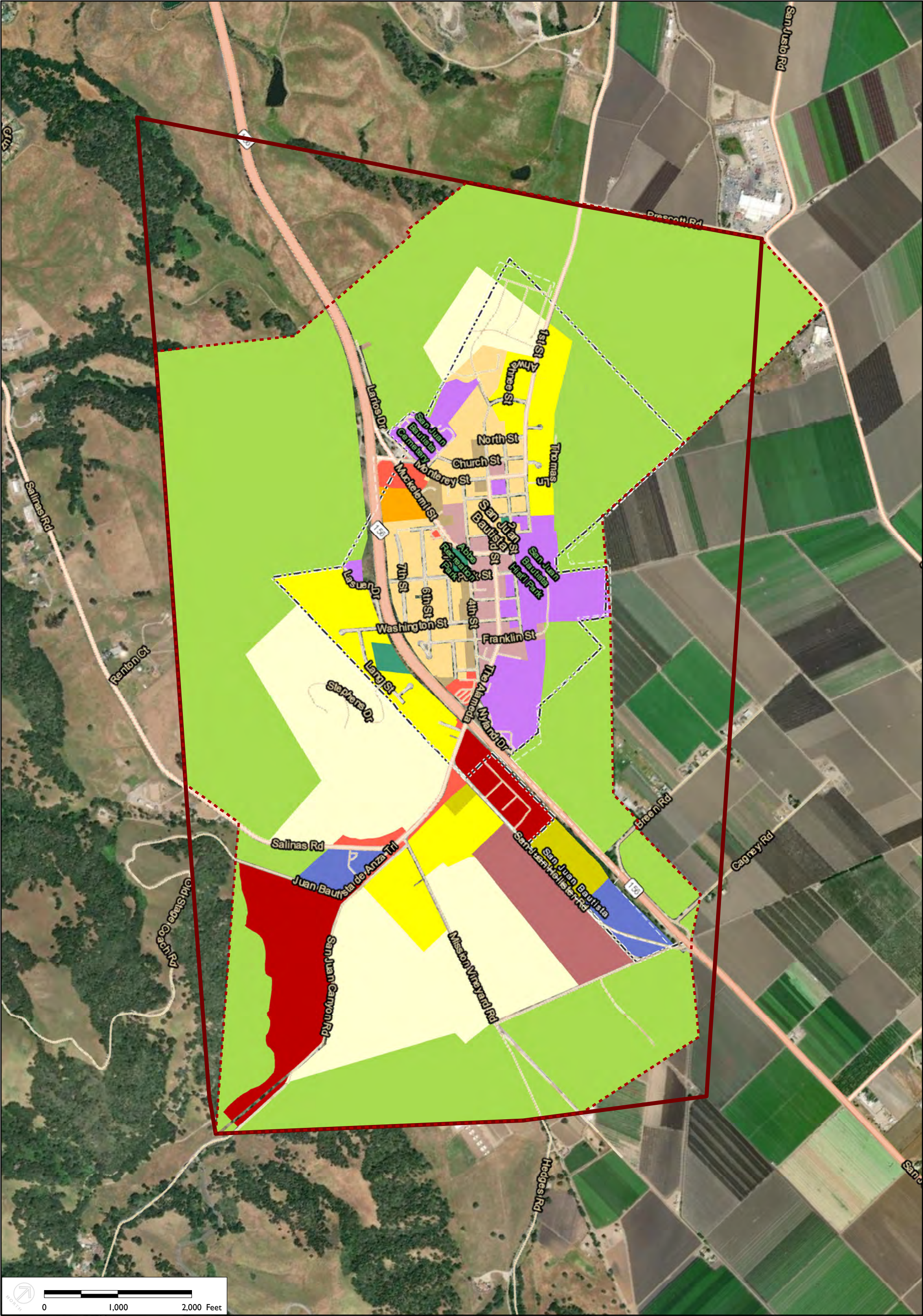
- T-1 Single-Family Residential

Other

- S-4 Regional Commercial
- S-6 Neighborhood Mixed Use
- IND Industrial/Manufacturing
- INS Institutional/Civic
- OSR Open Space/Recreational

Legend

- City Limits
- Sphere of Influence
- Railroads



Source data:AMBAG, 2022

2020 SAN JUAN BAUTISTA PLACE TYPES

Suburban Place Types

- S-1 Single-Family Residential
- S-2 Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial
- S-6 Neighborhood Mixed Use

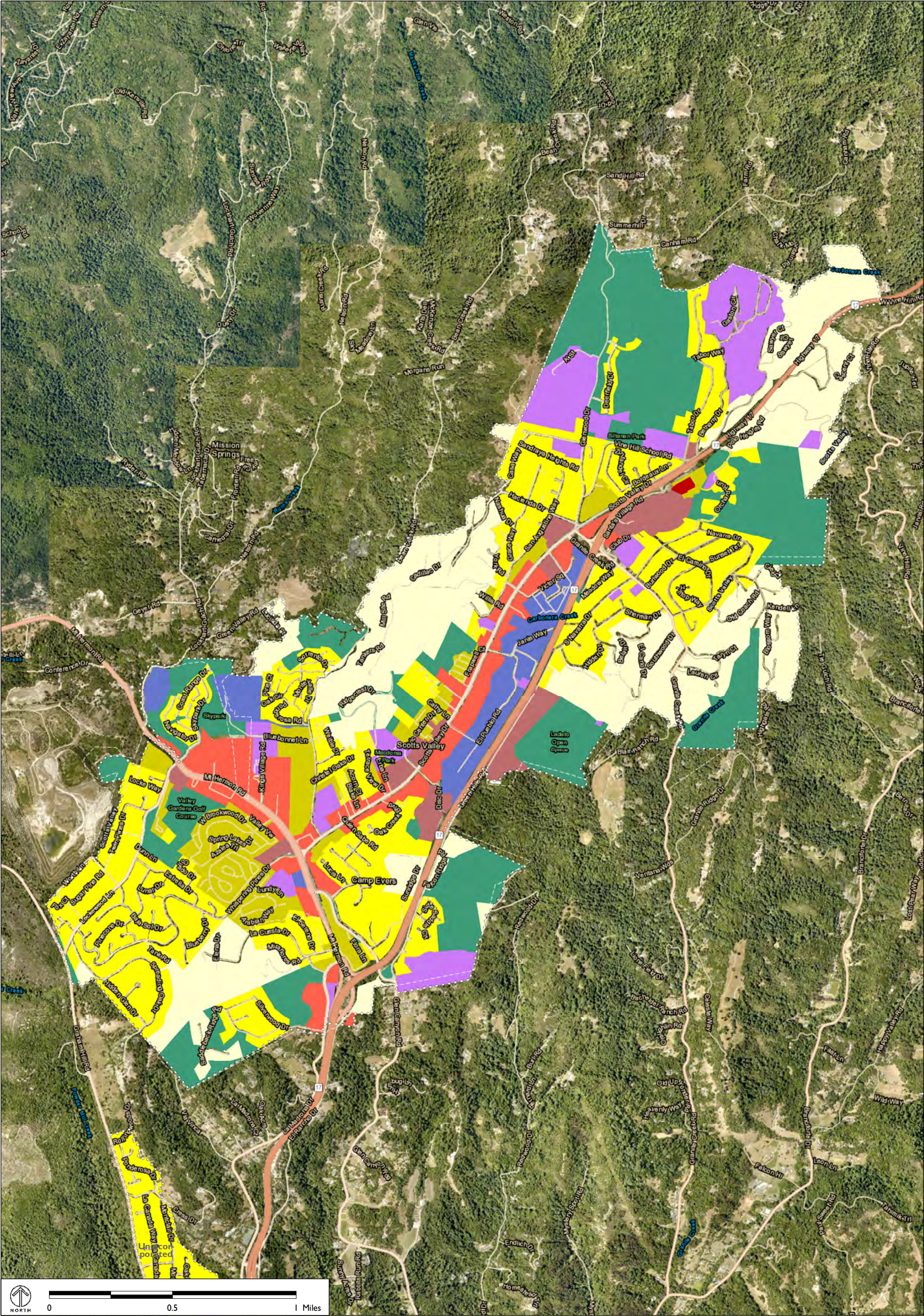
Town Place Types

- T-2 Multi-Family Residential
- Non-Urban Place Types
- NU-1 Agriculture
- NU-2 Rural Town Commercial
- NU-3 Rural Town Residential

Other

- NU-4 Exurban and Rural Residential
- IND Industrial/Manufacturing
- INS Institutional/Civic
- OSR Open Space/Recreational

- Proposed Sphere of Influence (expected to contract)
- City Limits
- Sphere of Influence



Source data:AMBAG, 2022

2020 SCOTTS VALLEY PLACE TYPES

Suburban Place Types

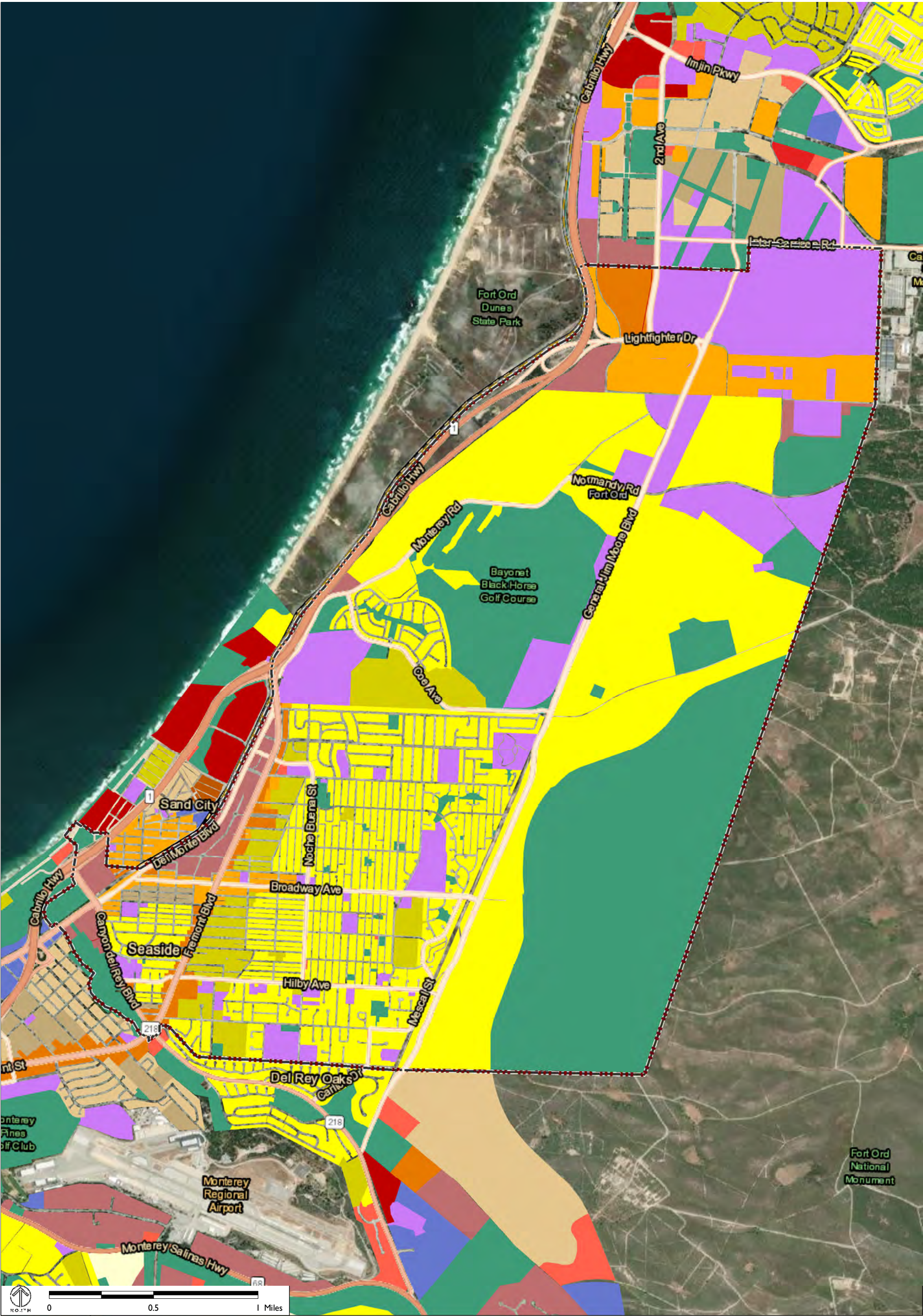
- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial
- S-5 Employment Center

Non-Urban Place Types

- NU-4 Exurban and Rural Residential
- Other
 - IND Industrial/Manufacturing
 - INS Institutional/Civic
 - OSR Open Space/Recreational

- Sphere of Influence
- City Limits
- Urban Service Boundary

SCOTTS VALLEY
2020 SCENARIO
INCLUDES SURROUNDING
UNINCORPORATED URBAN AREAS



Source data:AMBAG, 2022

2020 SEASIDE PLACE TYPES

Suburban Place Types

- S-1 Single-Family Residential
- S-2 Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial

Town Place Types

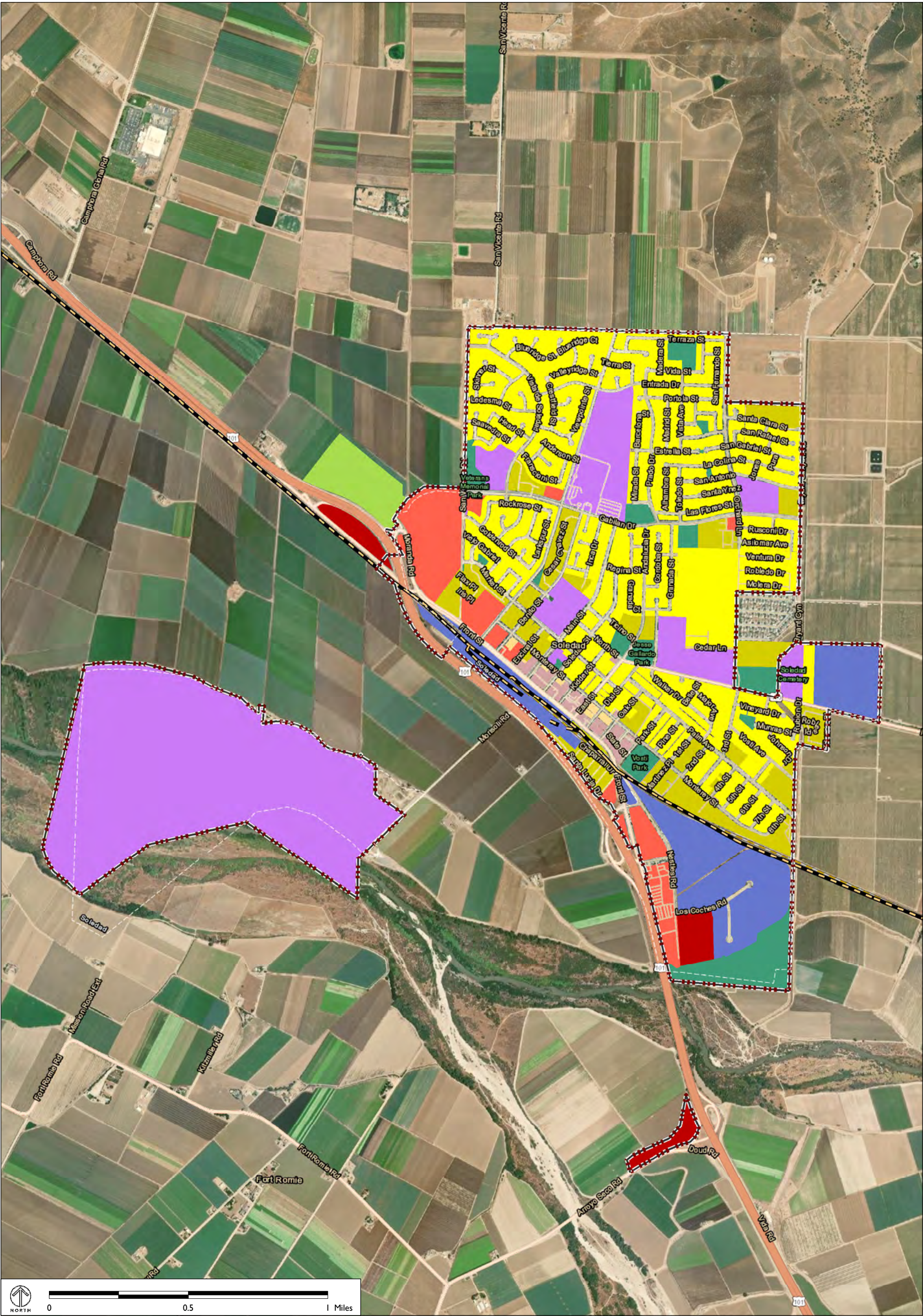
- S-5 Employment Center
- S-6 Neighborhood Mixed Use
- T-2 Multi-Family Residential
- T-3 Town Commercial

Other

- IND Industrial/Manufacturing
- INS Institutional/Civic
- OSR Open Space/Recreational

- City Limits
- Sphere of Influence
- Railroads

SEASIDE
2020 SCENARIO



Source data:AMBAG, 2022

2020 SOLEDAD PLACE TYPES

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential
- S-3 Neighborhood Commercial

S-4 Regional Commercial

Non-Urban Place Types

- NU-1 Agriculture
- NU-2 Rural Town Commercial

NU-3 Rural Town Residential

Other

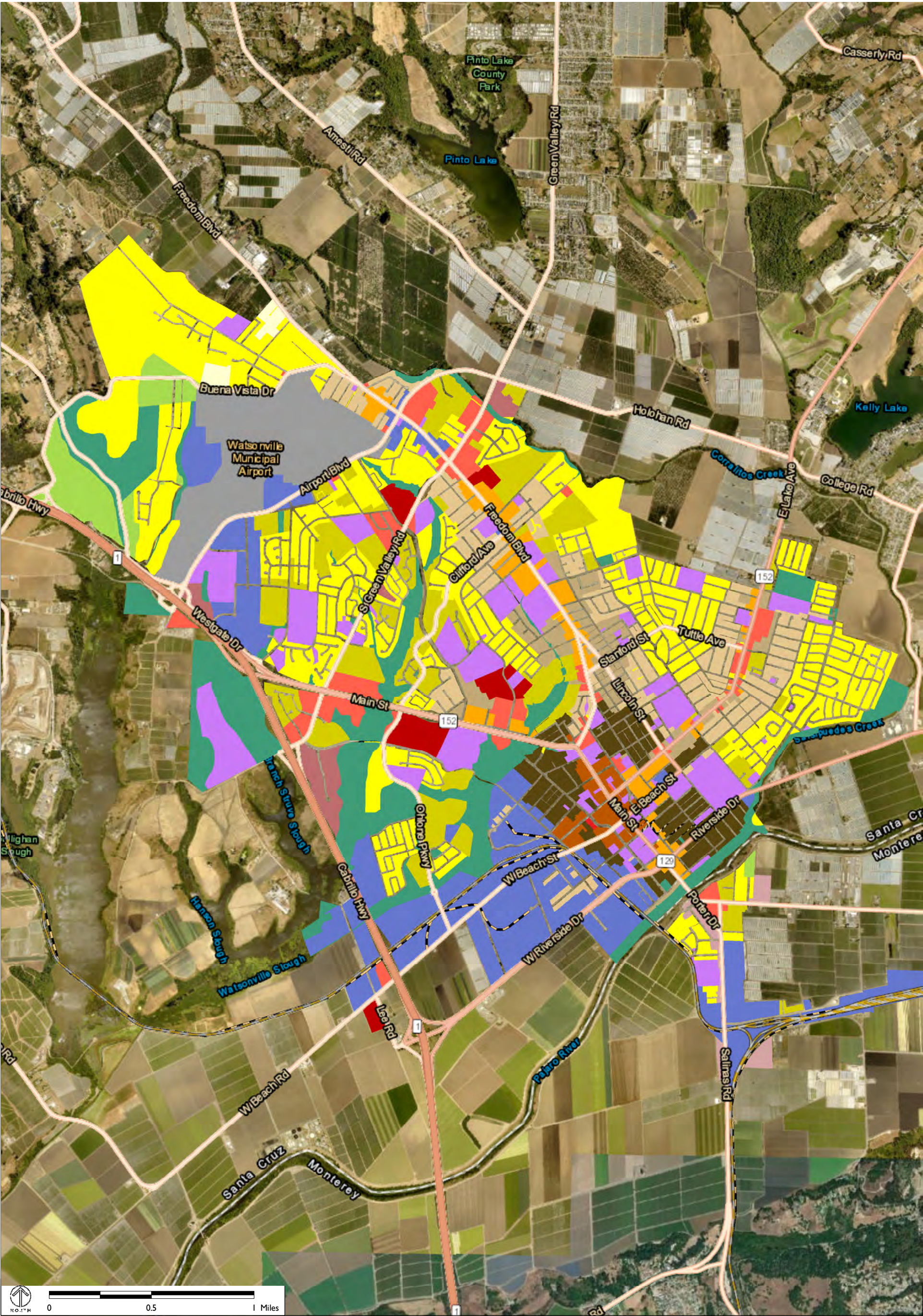
- IND Industrial/Manufacturing
- INS Institutional/Civic
- OSR Open Space/Recreational

City Limits

Sphere of Influence

Railroads

SOLEDAD
2020 SCENARIO



Source data: AMBAG, 2022

2020 WATSONVILLE PLACE TYPES

Urban Place Types

- U-2 Urban Multi-Family Residential
- U-4 Urban Mixed Use

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential

- S-3 Neighborhood Commercial
- S-4 Regional Commercial
- S-5 Employment Center
- S-6 Neighborhood Mixed Use

Town Place Types

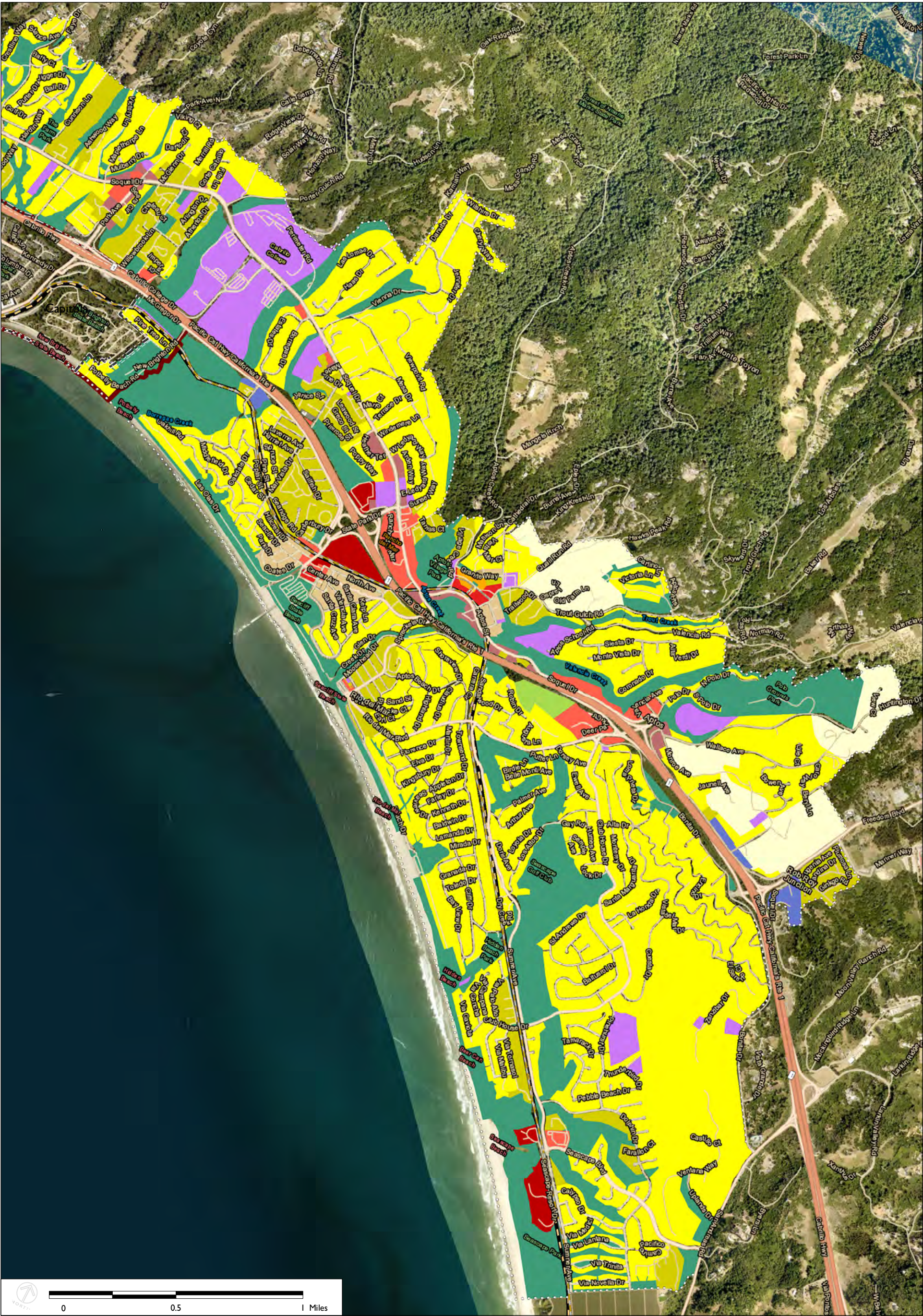
- T-1 Town Single-Family Residential

- T-2 Town Multi-Family Residential
- T-3 Town Commercial
- Non-Urban Place Types
- NU-1 Agriculture
- NU-2 Rural Town Commercial
- NU-4 Exurban and Rural Residential

Other

- IND Industrial/Manufacturing
- INS Institutional/Civic
- OSR Open Space/Recreational
- AT Airport

- Sphere of Influence
- City Limits
- Railroads



Source data: AMBAG, 2022

2045 URBAN APTOS PLANNING AREA PLACE TYPES

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial
- S-5 Employment Center

Town Place Types

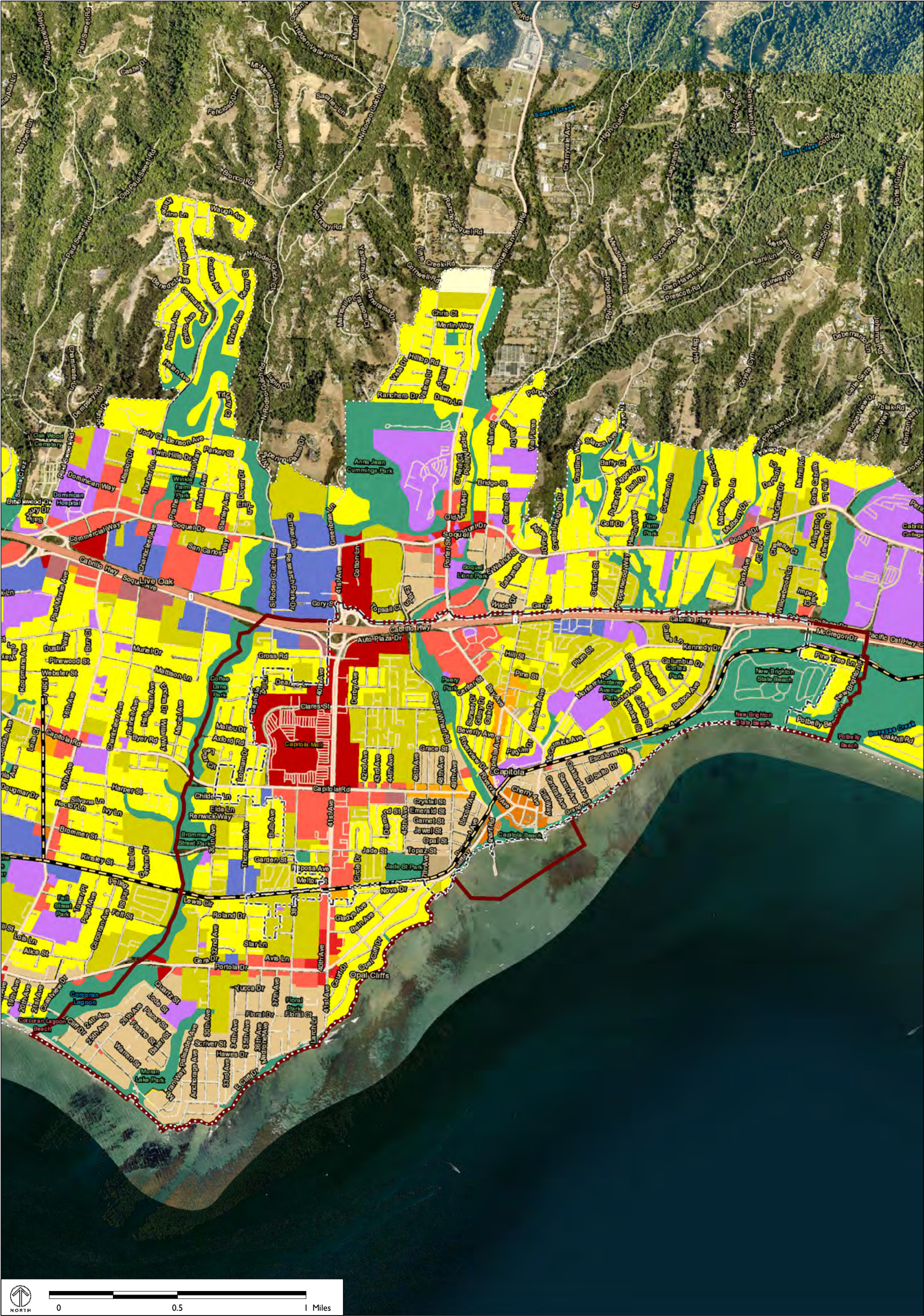
- T-1 Town Single-Family Residential
- T-2 Town Multi-Family Residential
- T-3 Town Commercial

Non-Urban Place Types

- NU-1 Agriculture
- NU-4 Exurban and Rural Residential
- Other
 - IND Industrial/Manufacturing
 - INS Institutional/Civic
 - OSR Open Space/Recreational

- Sphere of Influence
- City Limits
- Urban Service Boundary
- Railroads

APTOS URBAN AREA
2045 SCENARIO
INCLUDES ADJACENT
INCORPORATED URBAN AREAS



Source data:AMBAG, 2022

2045 CAPITOLA, LIVE OAK, AND SOQUEL PLACE TYPES

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial
- S-5 Employment Center

Town Place Types

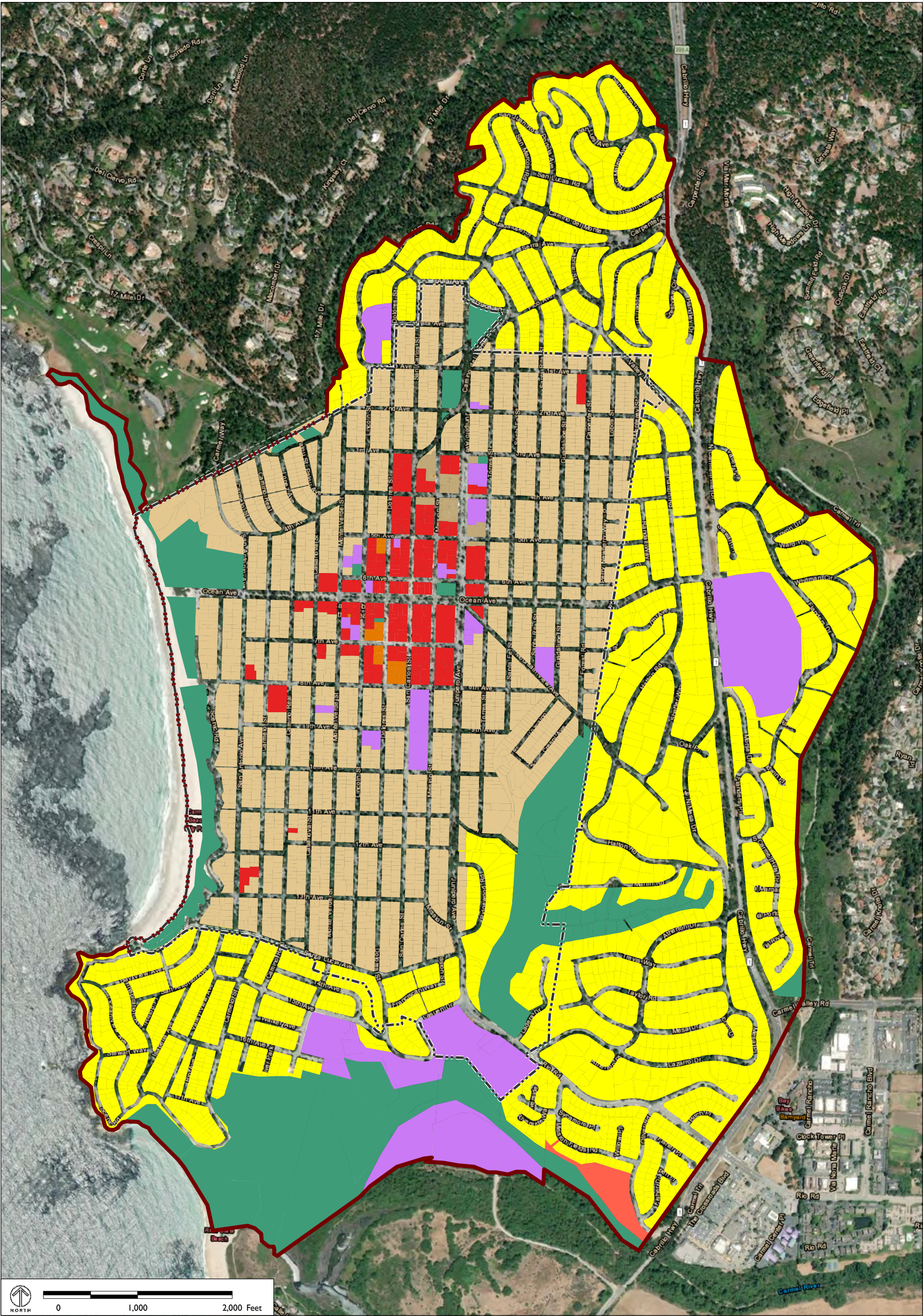
- T-1 Town Single-Family Residential
- T-2 Town Multi-Family Residential
- T-3 Town Commercial
- T-4 Town Mixed Use

Non-Urban Place Types

- NU-4 Exurban and Rural Residential
- Other
 - IND Industrial/Manufacturing
 - INS Institutional/Civic
 - OSR Open Space/Recreational

- Urban Service Boundary
- Sphere of Influence
- City Limits
- Railroads

CAPITOLA, LIVE OAK,
AND SOQUEL
2045 SCENARIO
INCLUDES SURROUNDING
UNINCORPORATED URBAN AREAS



Source data: AMBAG, 2022

2045 CARMEL PLACE TYPES

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-3 Neighborhood Commercial

Town Place Types

- T-1 Town Single-Family Residential
- T-2 Town Multi-Family Residential

T-3 Town Commercial

T-4 Town Mixed Use

Other

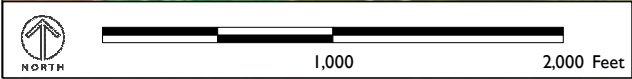
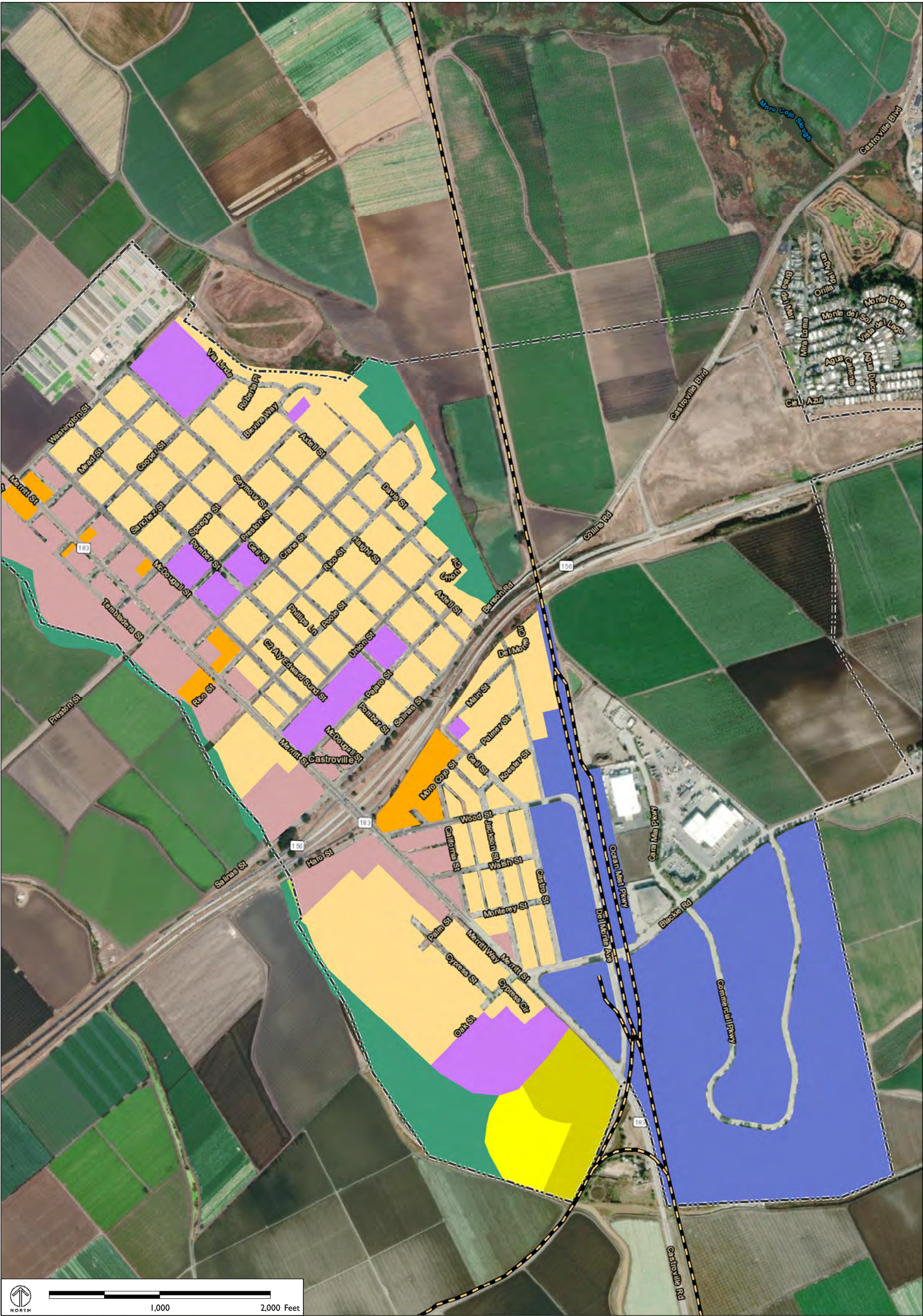
INS Institutional/Civic

OSR Open Space/Recreational

City Limits

Sphere of Influence

CARMEL
2045 SCENARIO



Source data: AMBAG, 2022

2045 CASTROVILLE PLACE TYPES

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential
- S-6 Neighborhood Mixed Use

Non-Urban Place Types

- NU-1 Agriculture

- NU-2 Rural Town Commercial

- NU-3 Rural Town Residential

Other

- IND Industrial/Manufacturing
- INS Institutional/Civic
- OSR Open Space/Recreational

- Community Area
- Railroads

CASTROVILLE
2045 SCENARIO



Source data: AMBAG, 2022

2045 CHUALAR PLACE TYPES

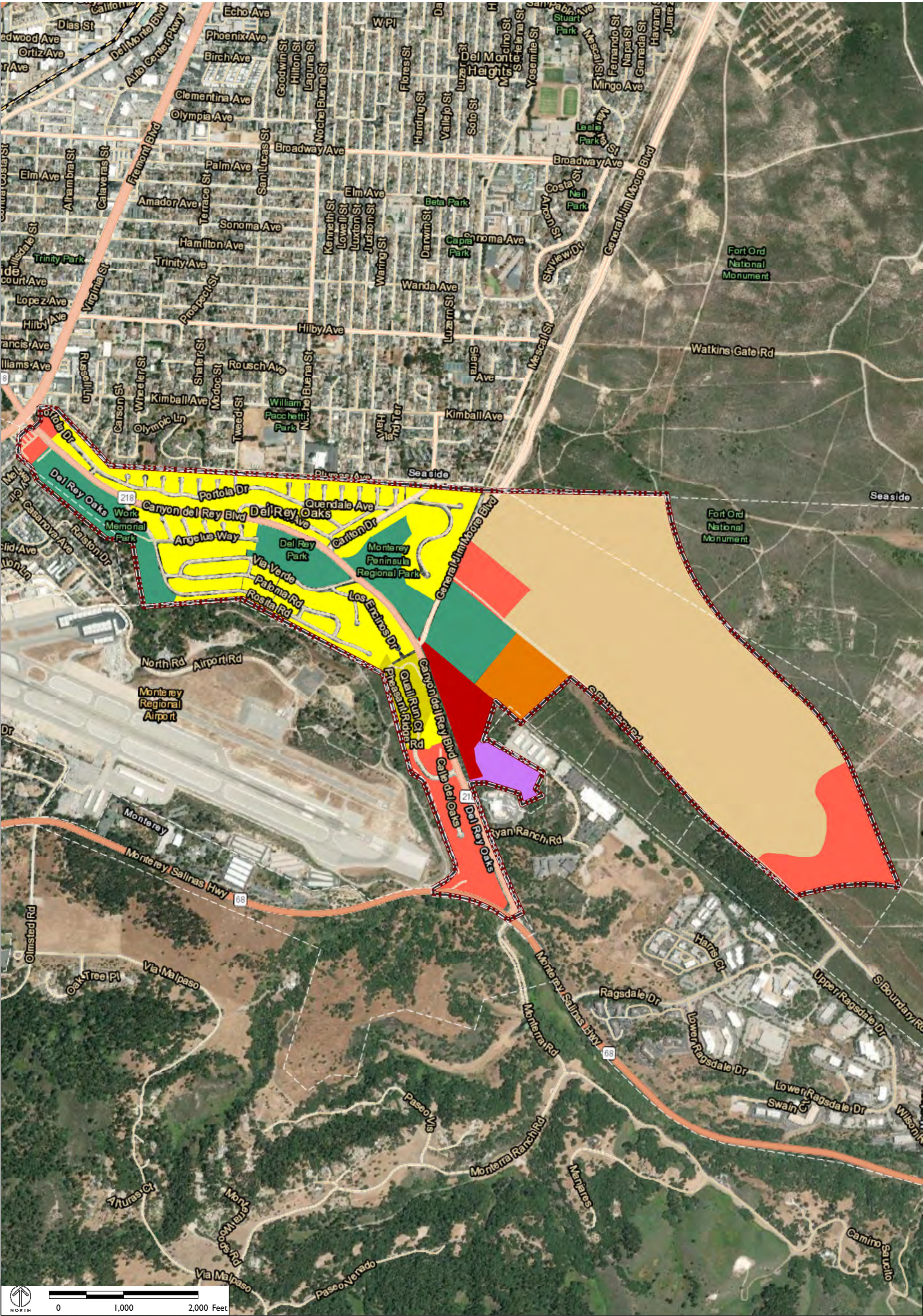
Non-Urban Place Types

- NU-1 Agriculture
- NU-2 Rural Town Commercial
- NU-3 Rural Town Residential

Other

- INS Institutional/Civic

- Census Designated Place
- Railroads



Source data: AMBAG, 2022

2045 DEL REY OAKS PLACE TYPES

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial

S-5 Employment Center

Town Place Types

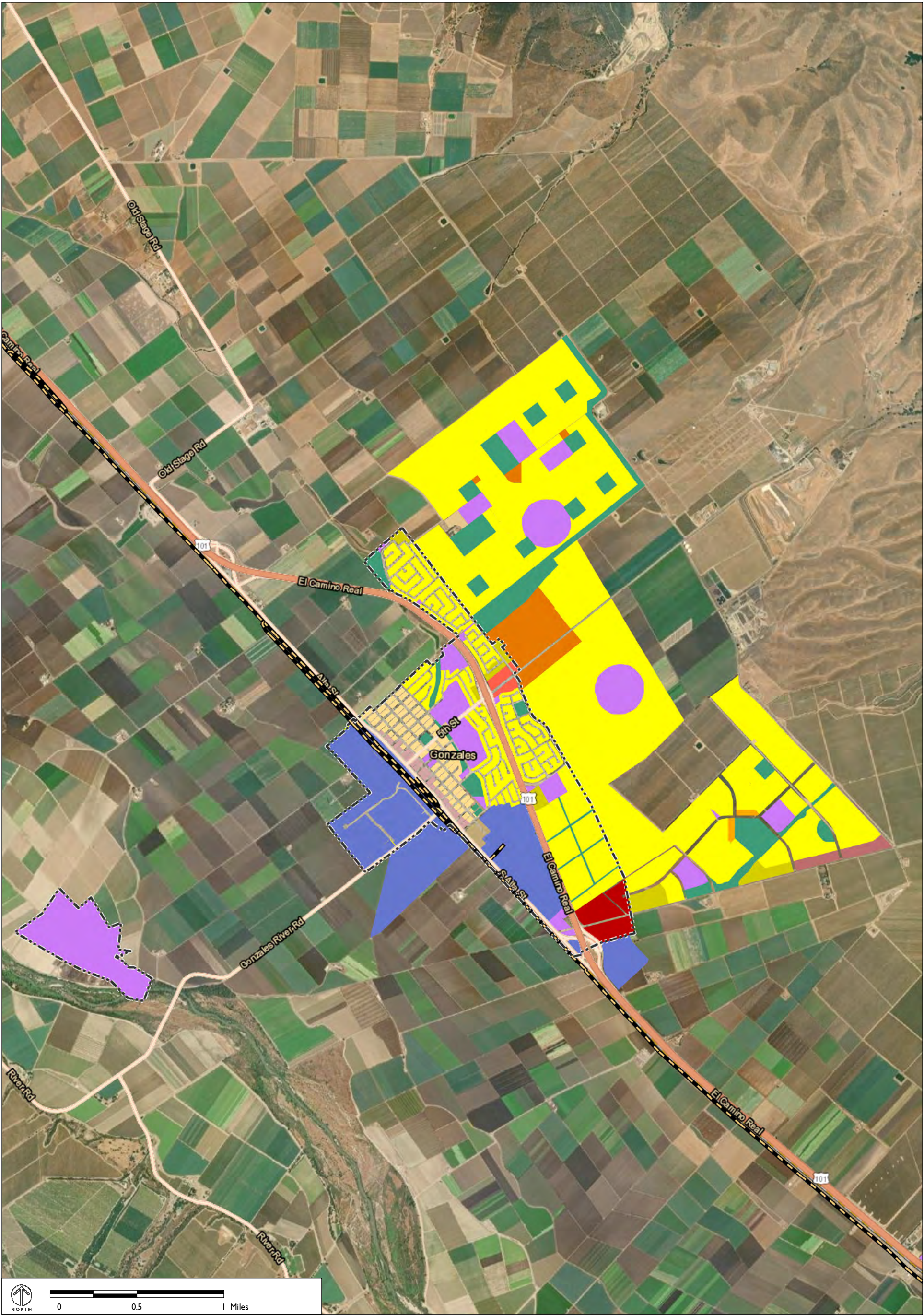
- T-1 Town Single Family Residential
- T-2 Town Multi-Family Residential
- T-4 Town Mixed Use

Other

- IND Industrial/ Manufacturing
- INS Institutional/ Civic
- OSR Open Space/Recreational

- City Limits
- Sphere of Influence
- Railroads

DEL REY OAKS
2045 SCENARIO



Source data:AMBAG, 2022

2045 GONZALES PLACE TYPES

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial
- S-5 Employment Center

Town Place Types

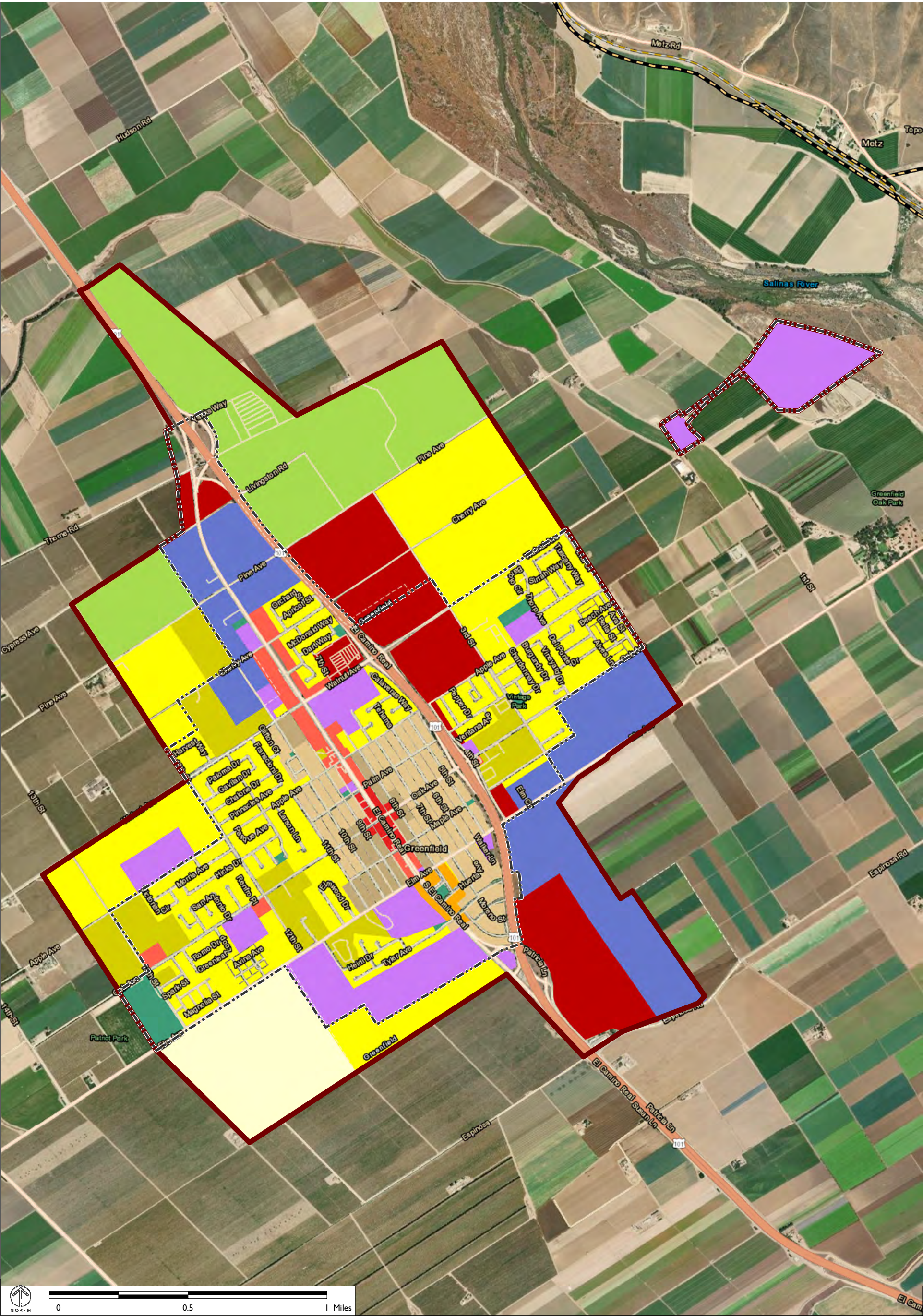
- S-6 Neighborhood Mixed Use
- T-1 Town Single-Family Residential
- T-2 Town Multi-Family Residential
- T-4 Town Mixed Use

Non-Urban Place Types

- NU-2 Rural Town Commercial
- NU-3 Rural Town Residential
- Other
- IND Industrial/Manufacturing
- INS Institutional/Civic

- OSR Open Space/Recreational
- City Limits
- Sphere of Influence
- Railroads

GONZALES
2045 SCENARIO



Source data: AMBAG, 2022

2045 GREENFIELD PLACE TYPES

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial
- S-6 Neighborhood Mixed Use

Town Place Types

- T-1 Town Single-Family Residential
- T-2 Town Multi-Family Residential
- T-3 Town Commercial

Non-Urban Place Types

- NU-1 Agriculture

Other

- IND Industrial/Manufacturing
- INS Institutional/Civic
- OSR Open Space/Recreational

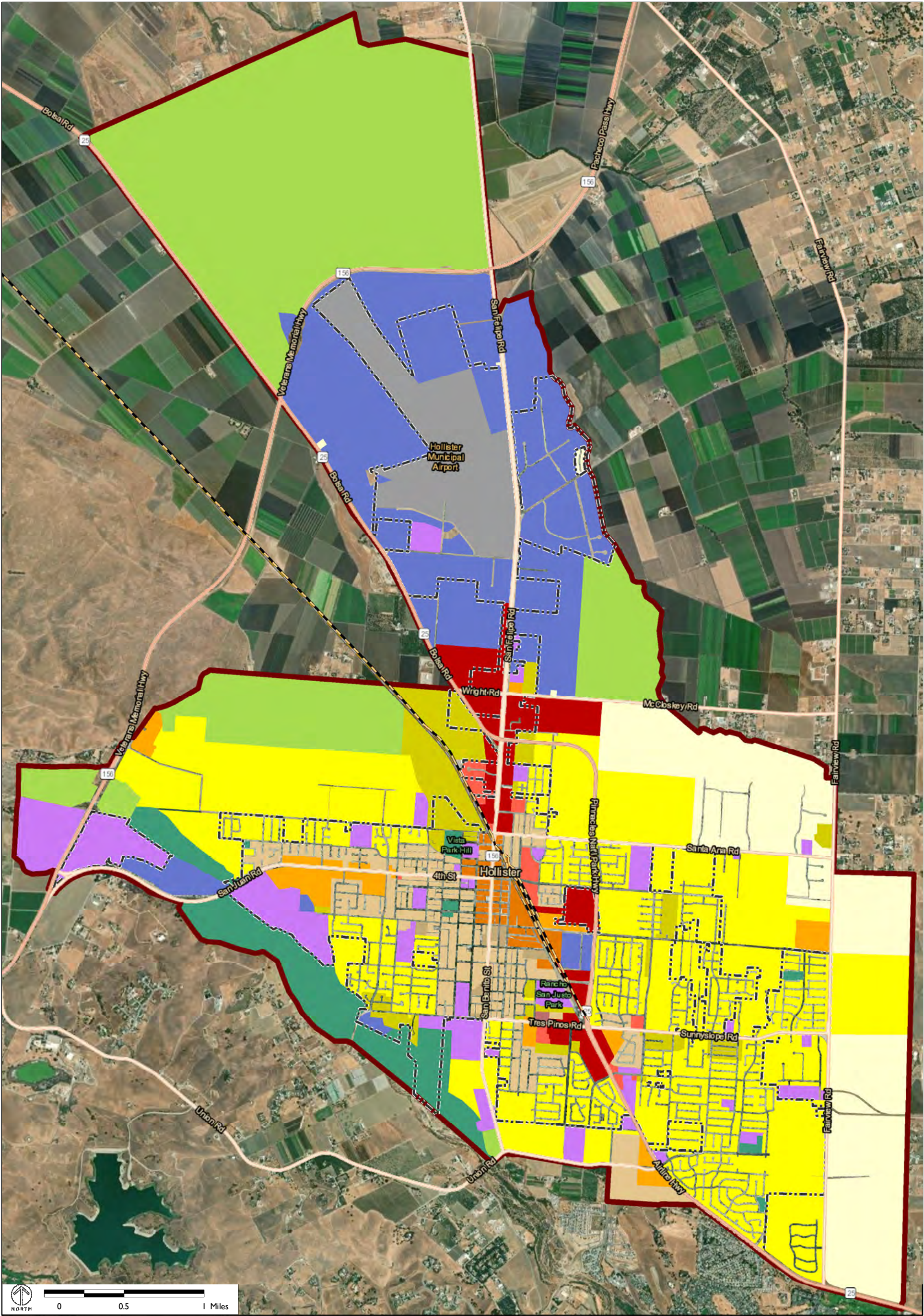
- NU-4 Exurban and Rural Residential

City Limits

Sphere of Influence

Railroads

GREENFIELD
2045 SCENARIO



Source data:AMBAG, 2022

2045 HOLLISTER PLACE TYPES

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial
- S-5 Employment Center

Town Place Types

- S-6 Neighborhood Mixed Use
- T-1 Town Single-Family Residential
- T-2 Town Multi-Family Residential
- T-4 Town Mixed Use

Non-Urban Place Types

- NU-1 Agriculture

Other

- IND Industrial/Manufacturing
- AT Airport
- INS Institutional/Civic
- OSR Open Space/Recreational

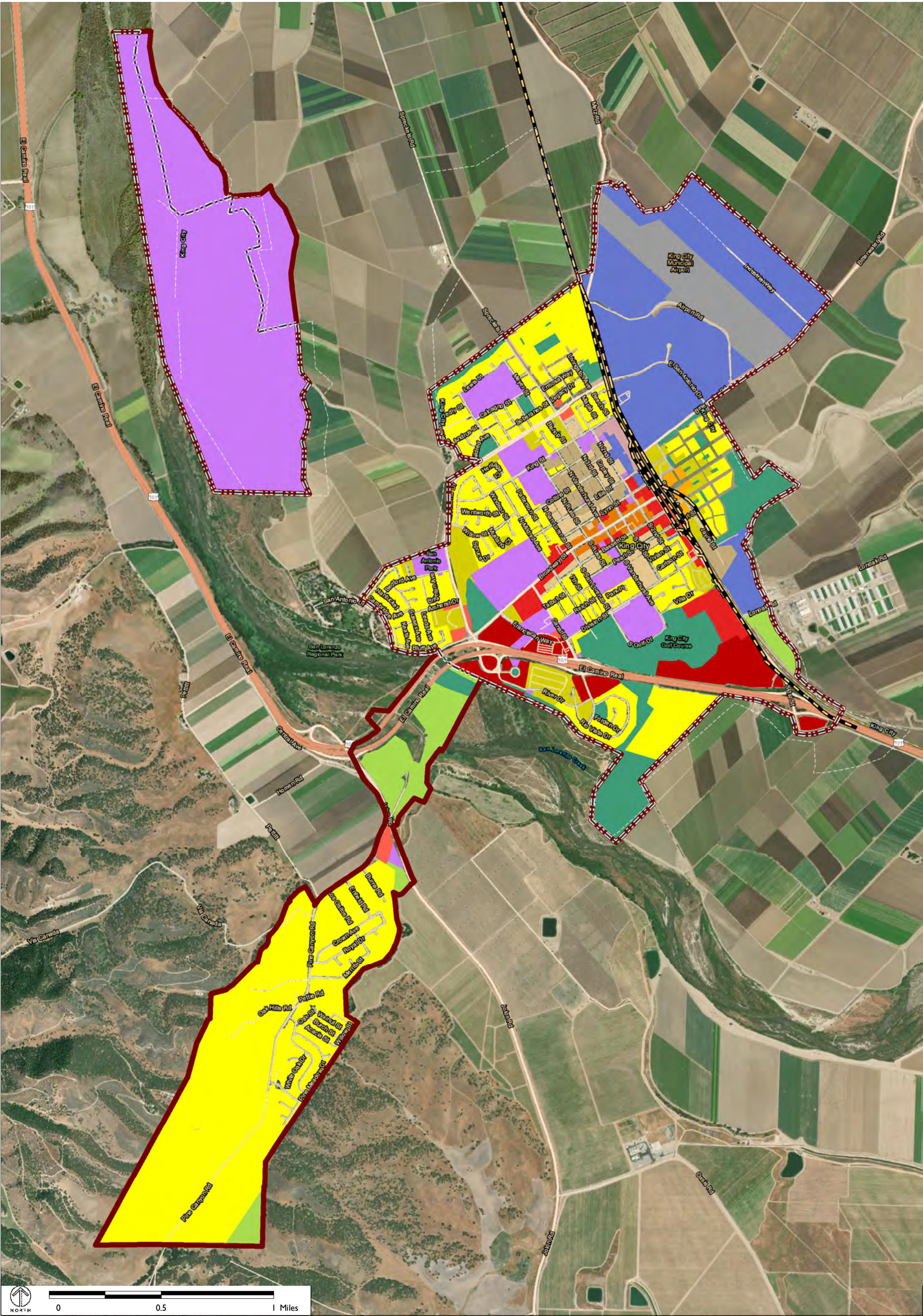
NU-4 Exurban and Rural Residential

City Limits

Sphere of Influence

Railroads

HOLLISTER
2045 SCENARIO



Source data:AMBAG, 2022

2045 KING CITY PLACE TYPES

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial
- S-5 Neighborhood Mixed Use

Town Place Types

- T-1 Town Single-Family Residential
- T-2 Town Multi-Family Residential
- T-3 Town Commercial
- T-4 Town Mixed Use

Non-Urban Place Types

- NU-1 Agriculture

NU-2 Rural Town Commercial

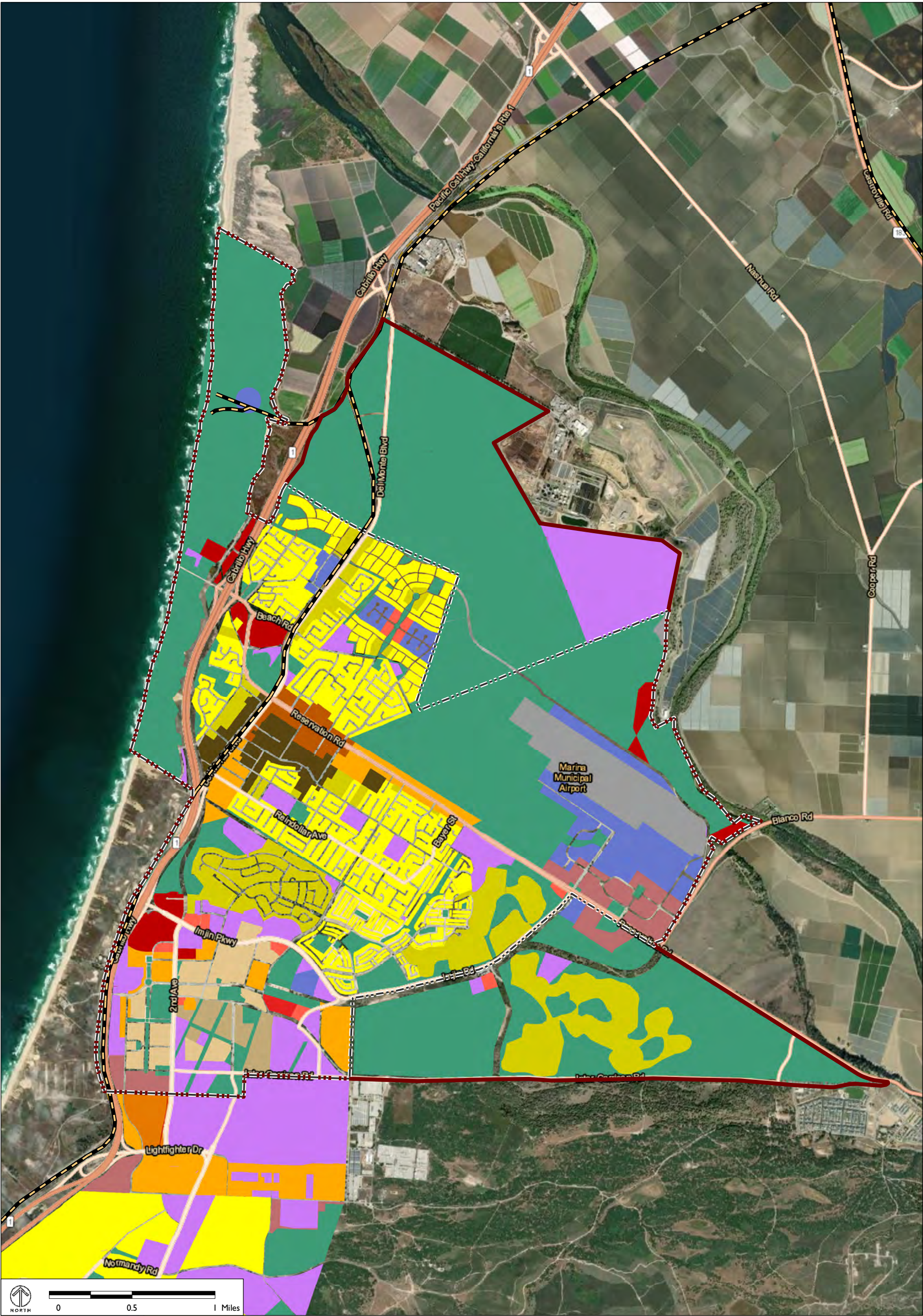
Other

- IND Industrial/Manufacturing
- AT Airport
- INS Institutional/Civic
- OSR Open Space/Recreational

City Limits

Sphere of Influence

Railroads



Source data:AMBAG, 2022

2045 MARINA PLACE TYPES

Urban Place Types

- U-2 Urban Multi-Family Residential
- U-4 Urban Mixed Use

Suburban Place Types

- S-1 Suburban Single-Family Residential

- S-2 Suburban Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial
- S-5 Employment Center
- S-6 Neighborhood Mixed Use

Town Place Types

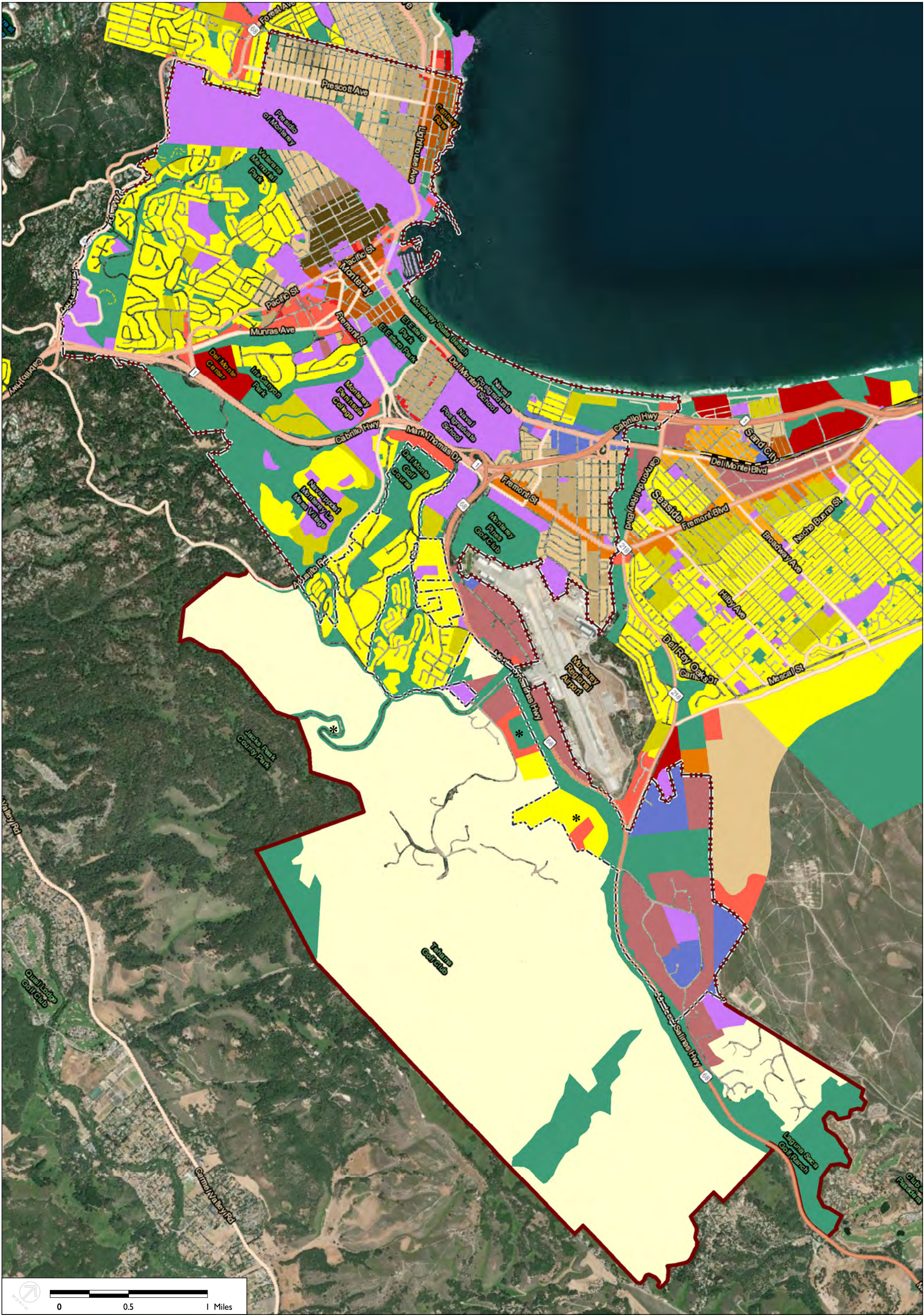
- T-1 Town Single-Family Residential
- T-2 Town Multi-Family Residential
- T-3 Town Commercial
- T-4 Town Mixed Use

Other

- IND Industrial/Manufacturing
- AT Airport
- INS Institutional/Civic
- OSR Open Space/Recreational

- City Limits
- Sphere of Influence
- Railroads

MARINA
2045 SCENARIO



Source data: AMBAG, 2022

2045 MONTEREY PLACE TYPES

Urban Place Types

- U-1 Single-Family Residential
- U-2 Multi-Family Residential
- U-3 Urban Commercial
- U-4 Urban Mixed Use

Suburban Place Types

- S-1 Single-Family Residential
- S-2 Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial
- S-5 Employment Center

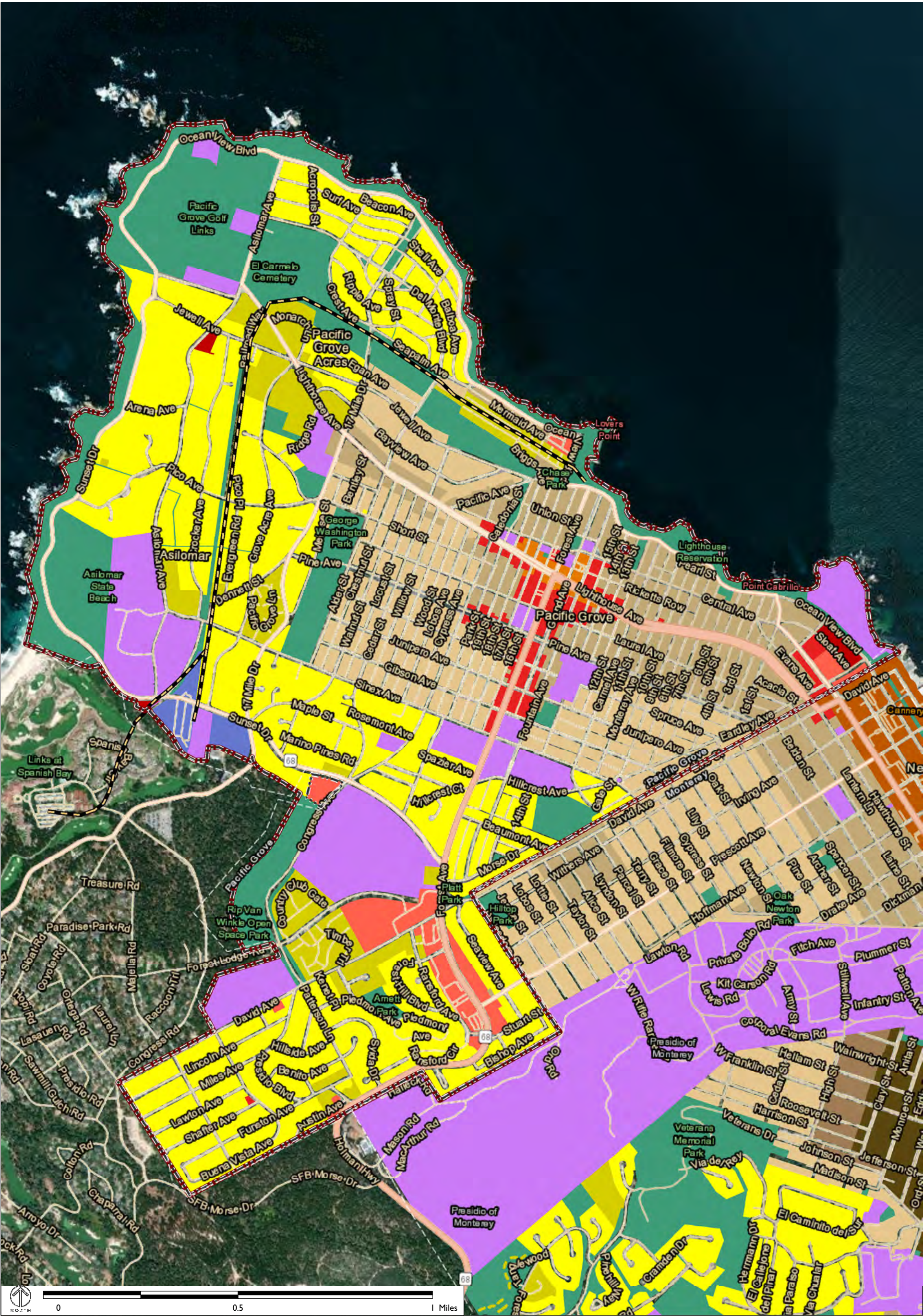
Town Place Types

- S-6 Neighborhood Mixed-Use
- T-1 Single-Family Residential
- T-2 Multi-Family Residential
- T-3 Town Commercial
- T-4 Town Mixed Use

Non-Urban Place Types

- NU-4 Exurban and Rural Residential
- Other
 - IND Industrial/Manufacturing
 - INS Institutional/Civic
 - OSR Open Space/Recreational

- City Limits
- Sphere of Influence
- Railroads



Source data: AMBAG, 2022

2045 PACIFIC GROVE PLACE TYPES

Suburban Place Types

- S-1 Single-Family Residential
- S-2 Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial

Town Place Types

- T-1 Single-Family Residential
- T-2 Multi-Family Residential
- T-3 Town Commercial
- T-4 Town Mixed-Use

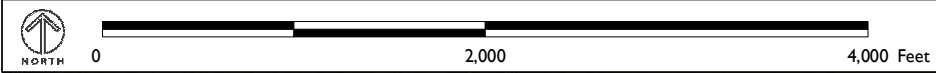
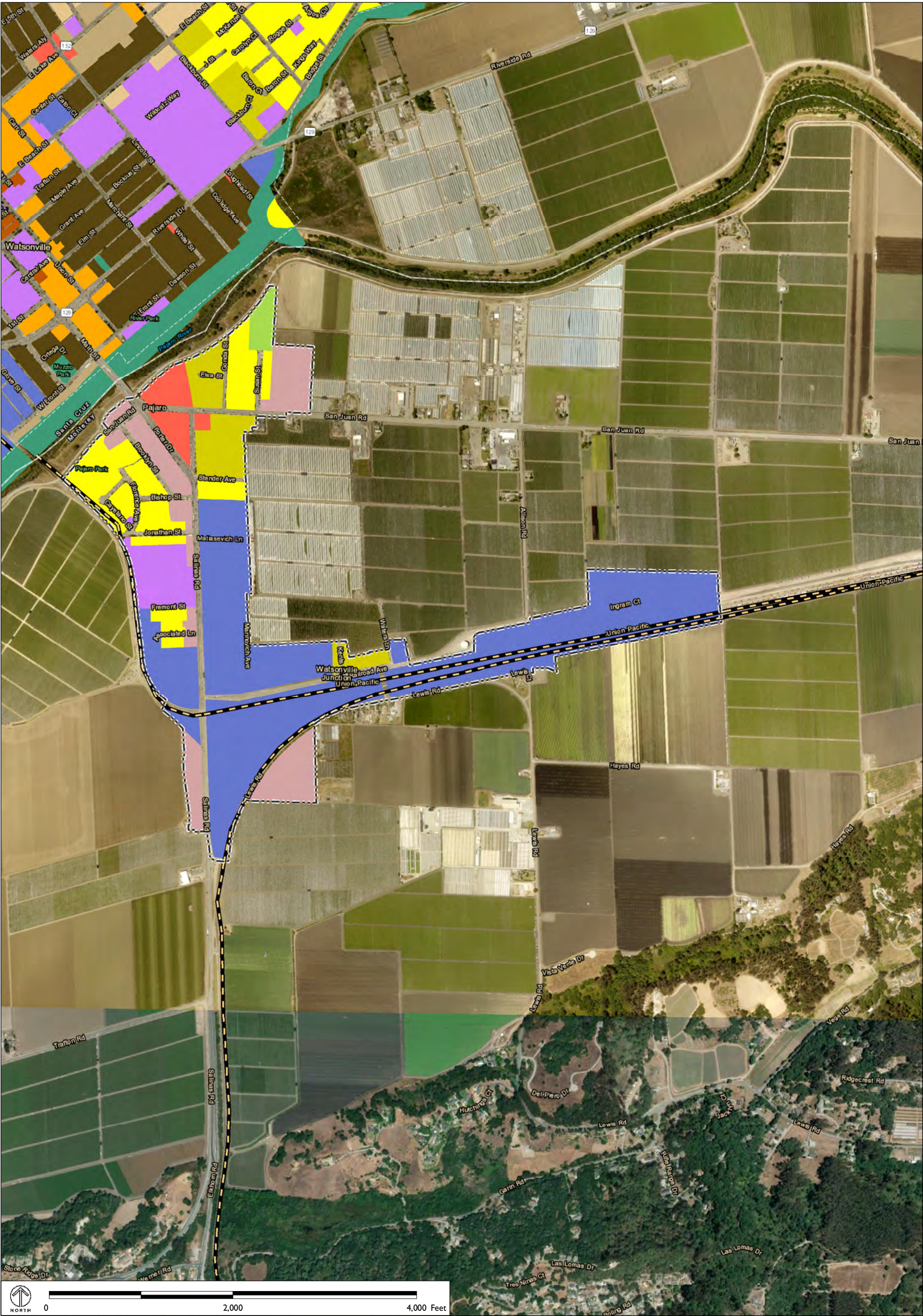
Other

- IND Industrial/Manufacturing
- INS Institutional/Civic
- OSR Open Space/Recreational

City Limits

Sphere of Influence

Railroads



Source data: AMBAG, 2022

2045 PAJARO PLACE TYPES

Suburban Place Types

- S-1 Single-Family Residential
- S-2 Multi-Family Residential
- S-3 Neighborhood Commercial

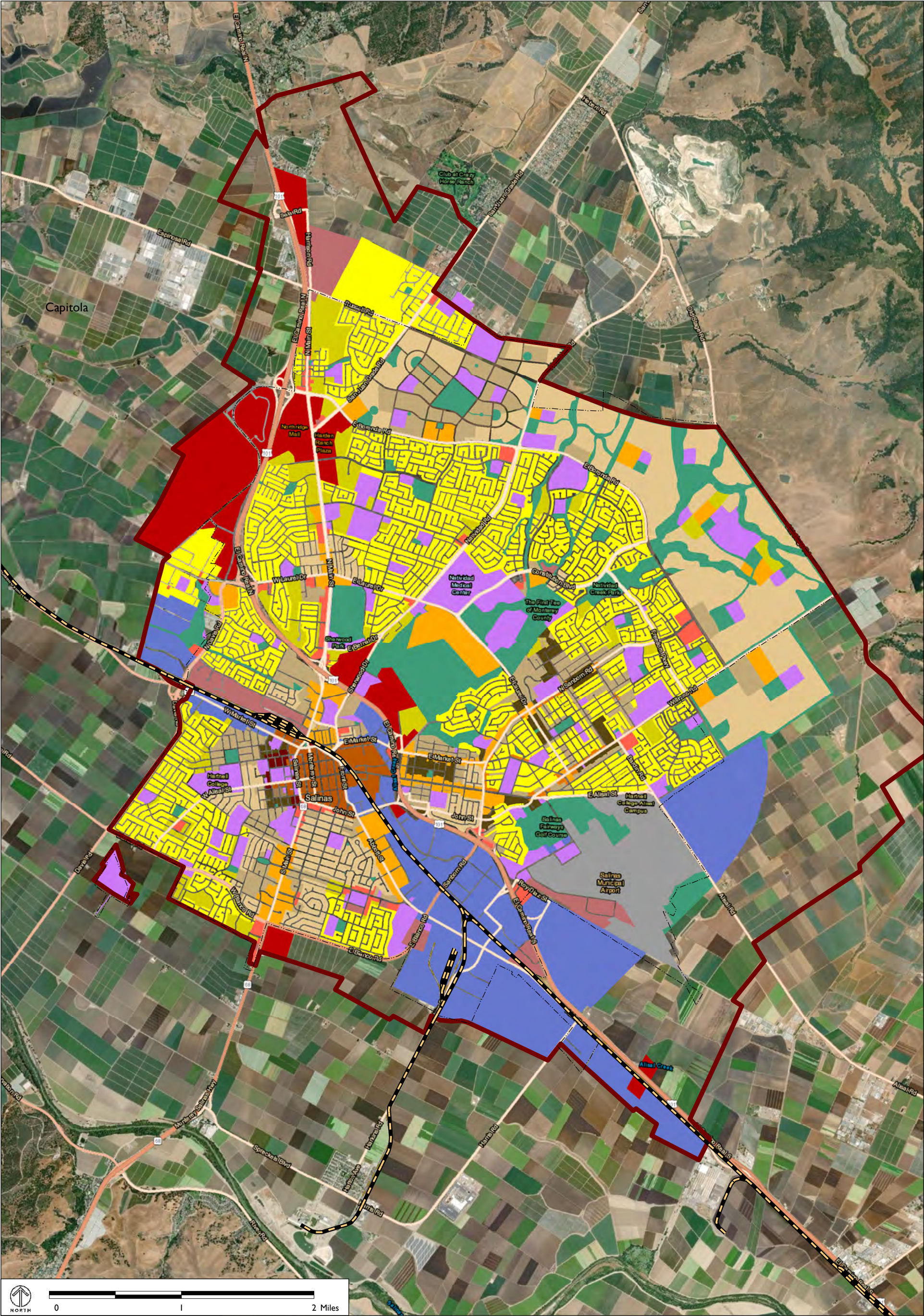
Non-Urban Place Types

- NU-1 Agriculture
- NU-2 Rural Town Commercial

Other

- IND Industrial/Manufacturing
- INS Institutional/Civic

- Community Area
- Railroads



Source data: AMBAG, 2022

2045 SALINAS PLACE TYPES

Urban Place Types

- U-1 Urban Single-Family Residential
- U-2 Urban Multi-Family Residential
- U-3 Urban Commercial
- U-4 Urban Mixed Use

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial
- S-5 Employment Center

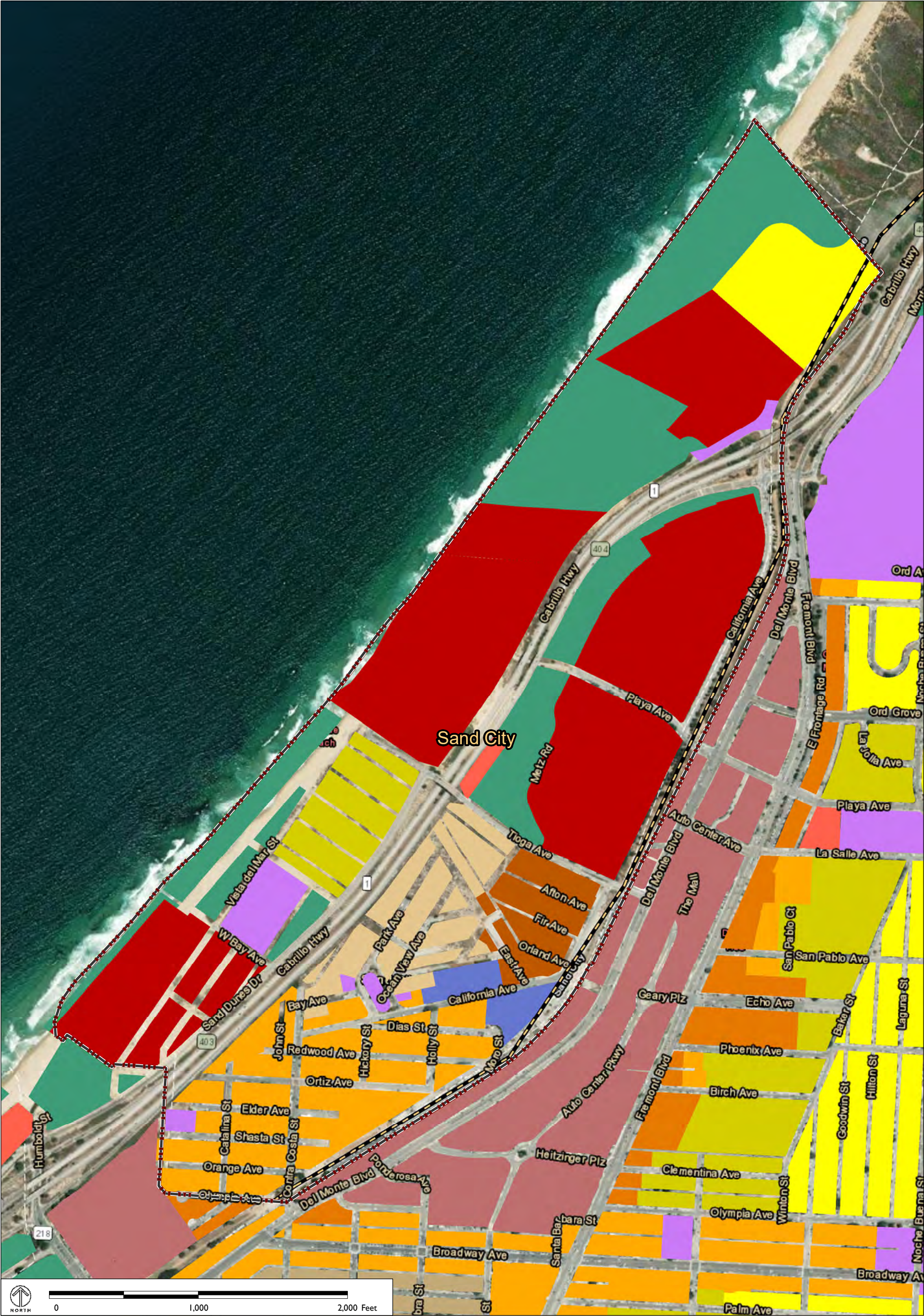
Town Place Types

- S-6 Neighborhood Mixed Use
- T-1 Town Single-Family Residential
- T-2 Town Multi-Family Residential
- T-3 Town Commercial
- T-4 Town Mixed Use

Other

- IND Industrial/Manufacturing
- AT Airport
- INS Institutional/Civic
- OSR Open Space/Recreational

- Sphere of Influence
- City Limits
- Railroads



Source data:AMBAG, 2022

2045 SAND CITY PLACE TYPES

Urban Place Types

U-4 Urban Mixed Use

S-4 Regional Commercial

T-2 Town Multi-Family Residential

OSR Open Space/Recreational

Suburban Place Types

S-1 Suburban Single-Family Residential

S-5 Employment Center

T-4 Town Mixed Use

City Limits

S-2 Suburban Multi-Family Residential

S-6 Neighborhood Mixed Use

Other
IND Industrial/Manufacturing

Sphere of Influence

S-3 Neighborhood Commercial

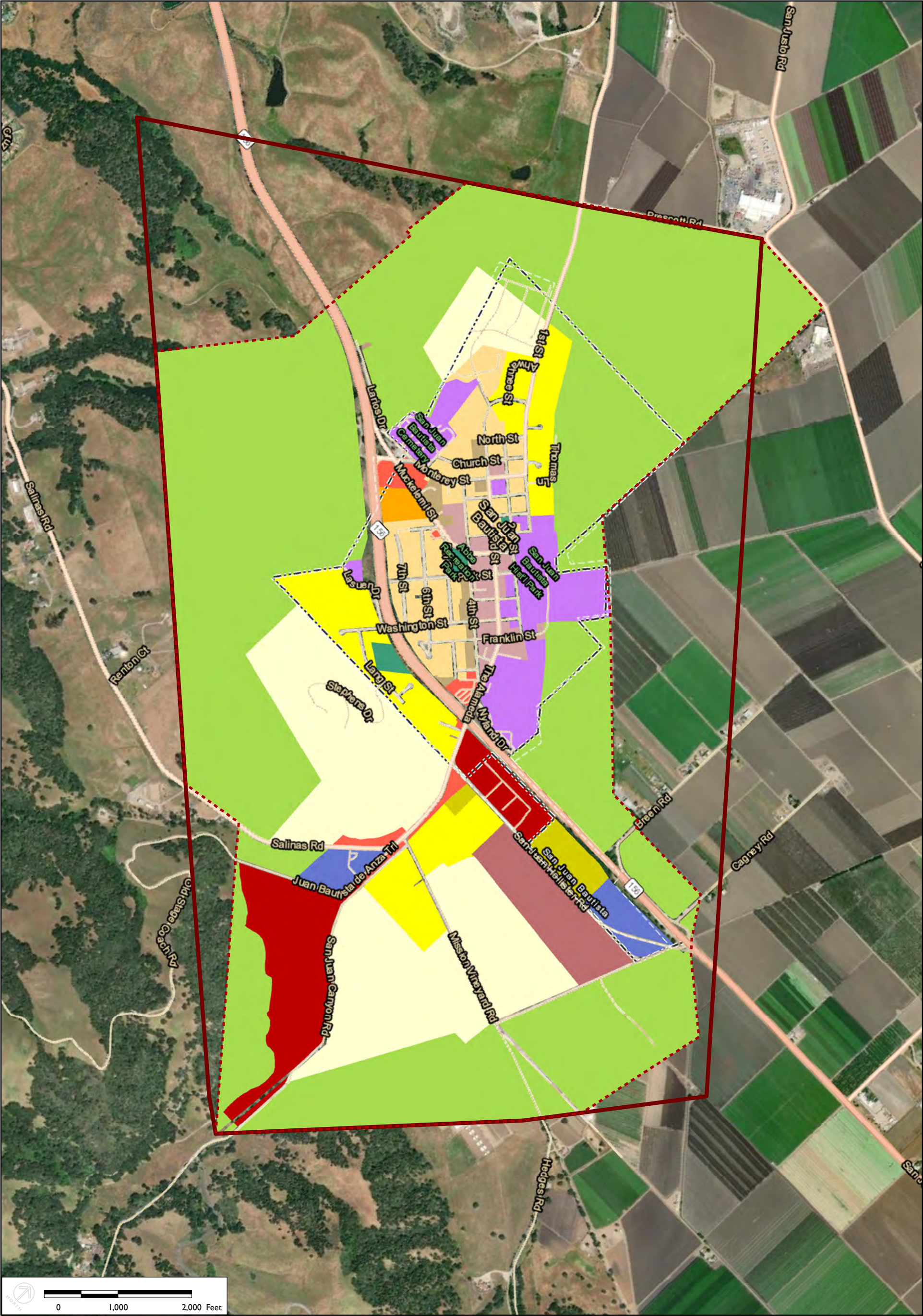
Town Place Types

T-1 Town Single-Family Residential

INS Institutional/Civic

Railroads

SAND CITY
2045 SCENARIO



Source data:AMBAG, 2022

2045 SAN JUAN BAUTISTA PLACE TYPES

Suburban Place Types

- S-1 Single-Family Residential
- S-2 Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial
- S-6 Neighborhood Mixed Use

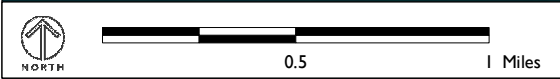
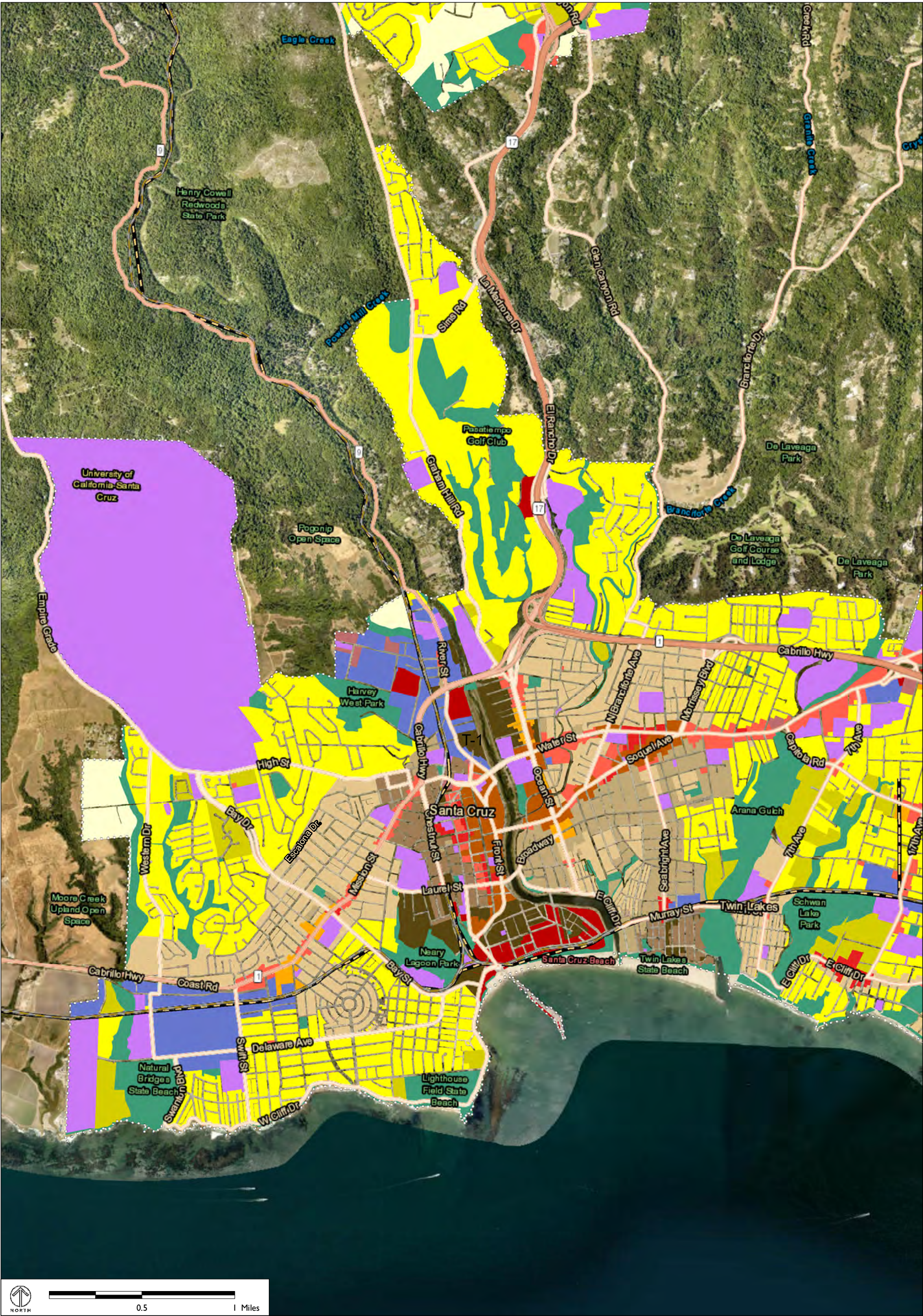
Town Place Types

- T-2 Multi-Family Residential
- Non-Urban Place Types
- NU-1 Agriculture
- NU-2 Rural Town Commercial
- NU-3 Rural Town Residential

Other

- NU-4 Exurban and Rural Residential
- IND Industrial/Manufacturing
- INS Institutional/Civic
- OSR Open Space/Recreational

- Proposed Sphere of Influence (expected to contract)
- City Limits
- Sphere of Influence



Source data: AMBAG, 2022

2045 SANTA CRUZ PLACE TYPES

Urban Place Types

- U-1 Single-Family Residential
- U-2 Multi-Family Residential
- U-4 Urban Mixed Use
- S-2
- S-3 Neighborhood Commercial
- S-4 Regional Commercial
- S-5 Employment Center
- S-6 Neighborhood Mixed Use

Suburban Place Types

- S-1 Single-Family Residential

Place Types

- T-1 Single-Family Residential
- T-2 Multi-Family Residential
- T-3 Town Commercial

Non-Urban Place Types

- NU-4 Exurban and Rural Residential

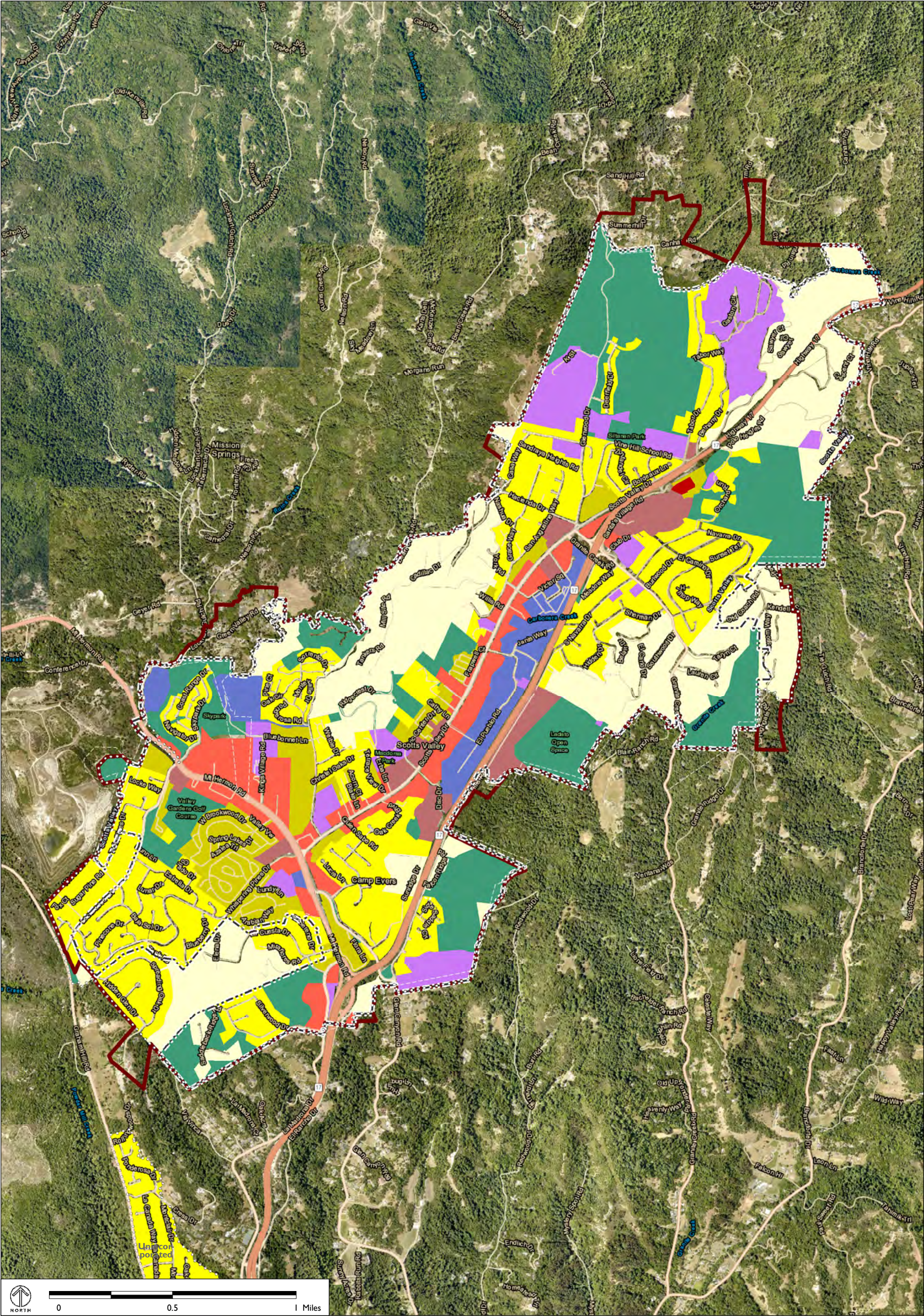
Other

- IND Industrial/Manufacturing
- INS Institutional/Civic
- OSR Open Space/Recreational

*Includes passive and active open space.

- Sphere of Influence
- City Limits
- Urban Service Boundary
- Railroads

SANTA CRUZ
2045 SCENARIO
INCLUDES SURROUNDING
UNINCORPORATED URBAN AREAS



Source data: AMBAG, 2022

2045 SCOTTS VALLEY PLACE TYPES

Suburban Place Types

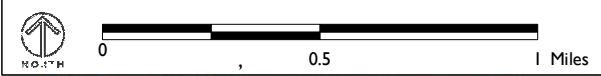
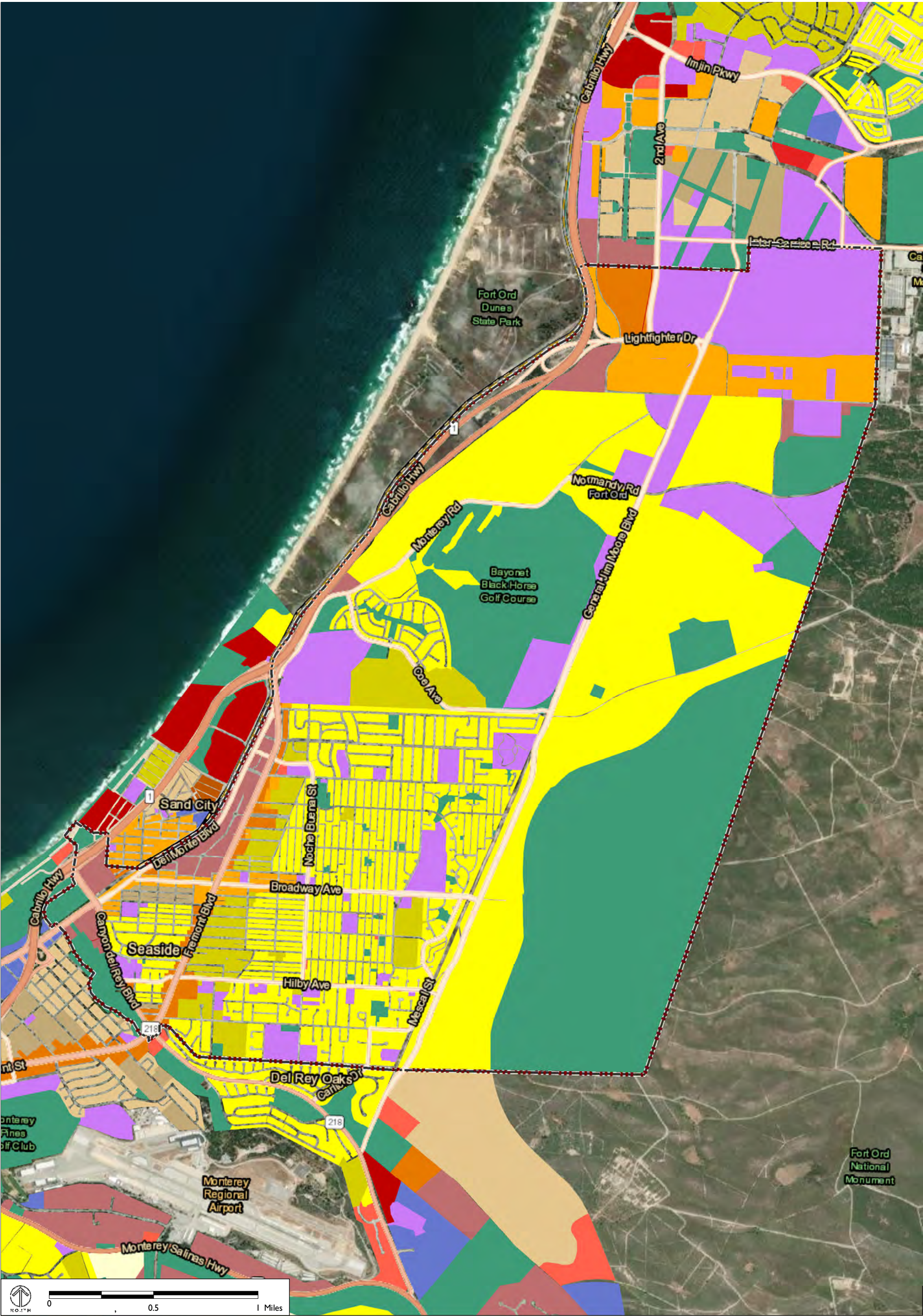
- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial
- S-5 Employment Center

Non-Urban Place Types

- NU-4 Exurban and Rural Residential
- Other
 - IND Industrial/Manufacturing
 - INS Institutional/Civic
 - OSR Open Space/Recreational

- Sphere of Influence
- City Limits
- Urban Service Boundary

SCOTTS VALLEY
2045 SCENARIO
INCLUDES SURROUNDING
UNINCORPORATED URBAN AREAS



Source data: AMBAG, 2022

2045 SEASIDE PLACE TYPES

Suburban Place Types

- S-1 Single-Family Residential
- S-2 Multi-Family Residential
- S-3 Neighborhood Commercial
- S-4 Regional Commercial

Town Place Types

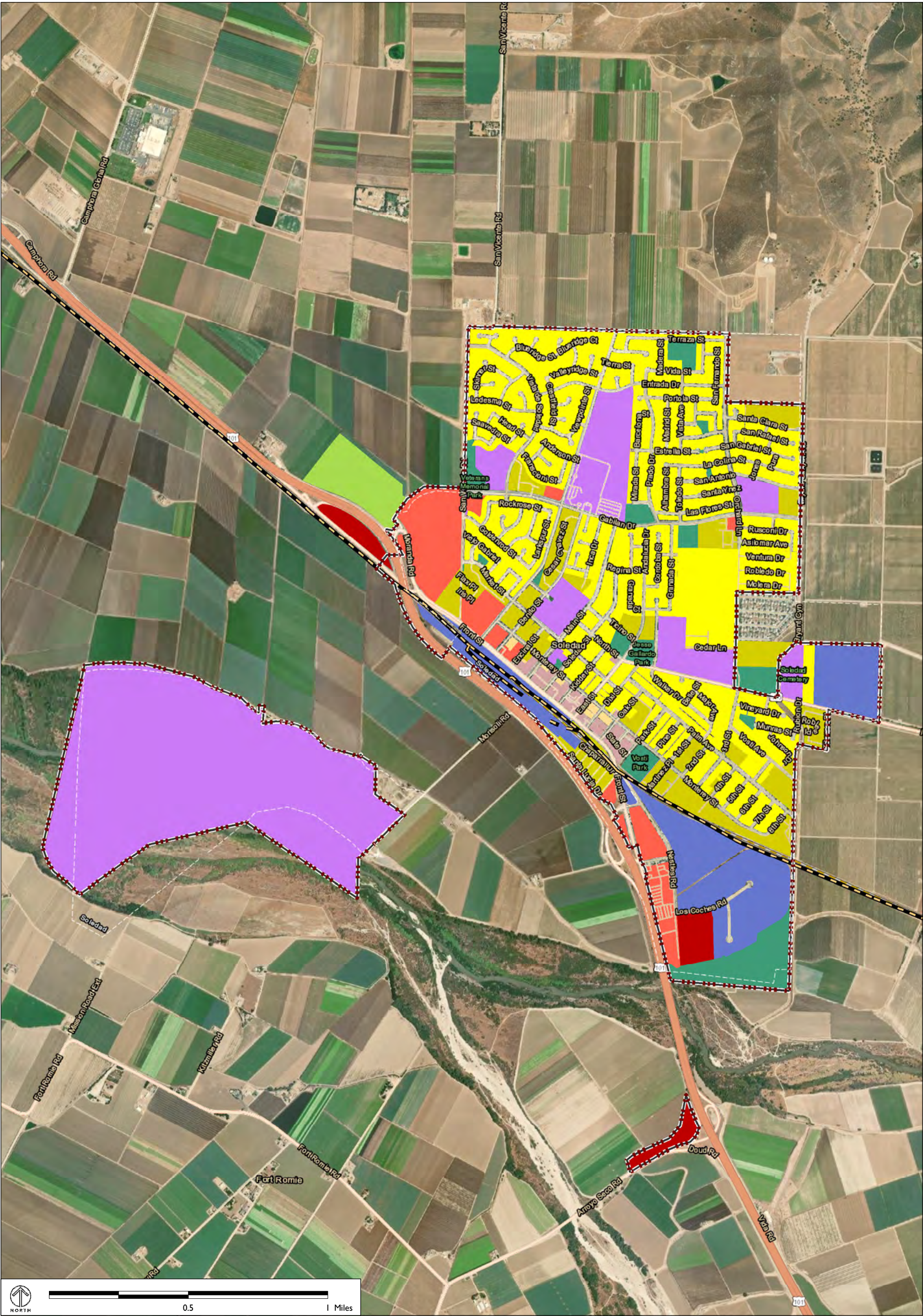
- S-5 Employment Center
- S-6 Neighborhood Mixed Use
- T-2 Multi-Family Residential
- T-3 Town Commercial

Other

- IND Industrial/Manufacturing
- INS Institutional/Civic
- OSR Open Space/Recreational

- City Limits
- Sphere of Influence
- Railroads

SEASIDE
2045 SCENARIO



Source data:AMBAG, 2022

2045 SOLEDAD PLACE TYPES

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential
- S-3 Neighborhood Commercial

S-4 Regional Commercial

Non-Urban Place Types

- NU-1 Agriculture
- NU-2 Rural Town Commercial

NU-3 Rural Town Residential

Other

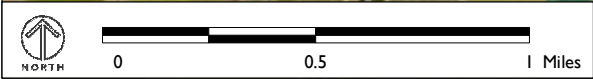
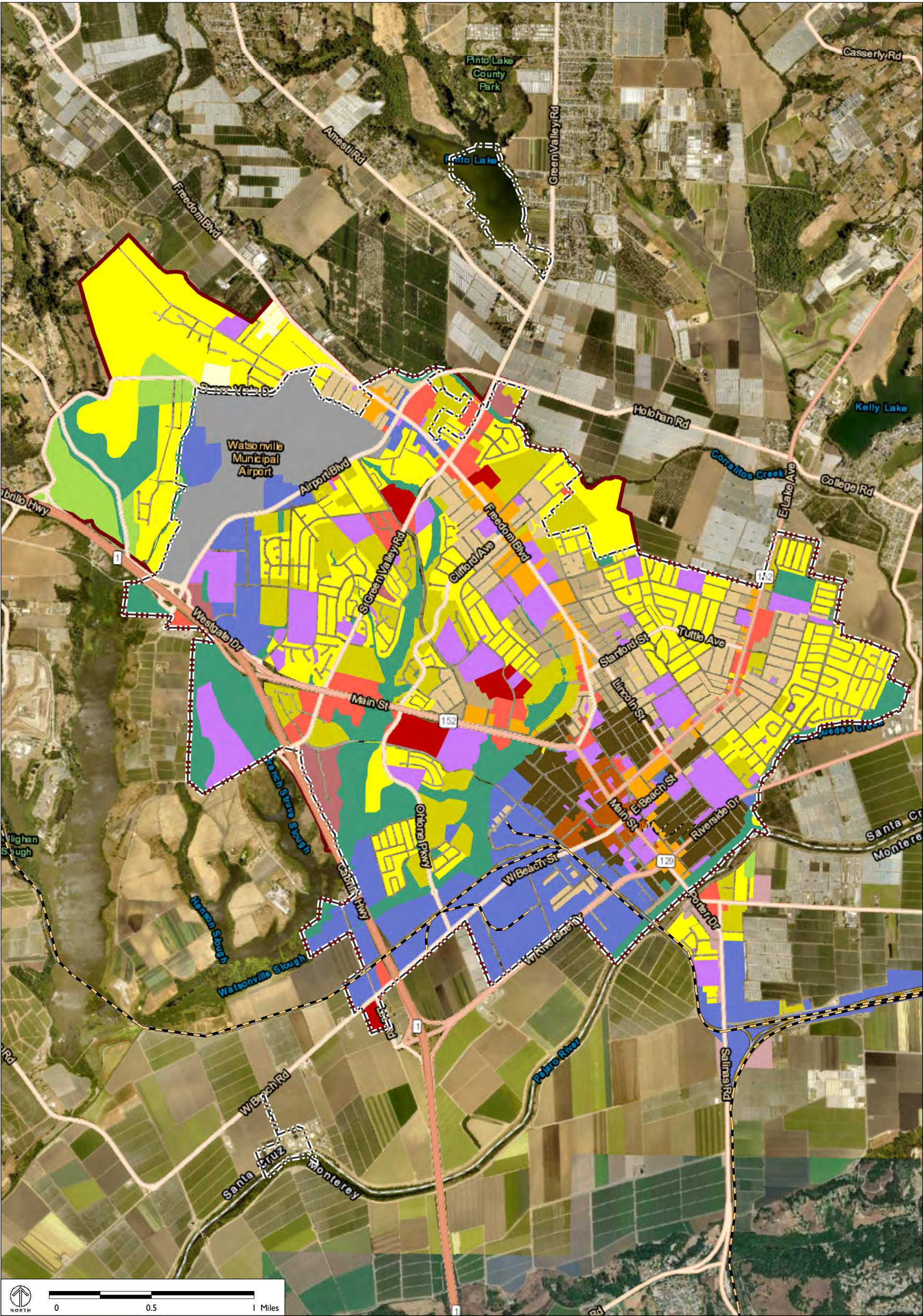
- IND Industrial/Manufacturing
- INS Institutional/Civic
- OSR Open Space/Recreational

City Limits

Sphere of Influence

Railroads

SOLEDAD
2045 SCENARIO



Source data:AMBAG, 2022

2045 WATSONVILLE PLACE TYPES

Urban Place Types

- U-2 Urban Multi-Family Residential
- U-4 Urban Mixed Use

Suburban Place Types

- S-1 Suburban Single-Family Residential
- S-2 Suburban Multi-Family Residential

- S-3 Neighborhood Commercial
- S-4 Regional Commercial
- S-5 Employment Center
- S-6 Neighborhood Mixed Use

Town Place Types

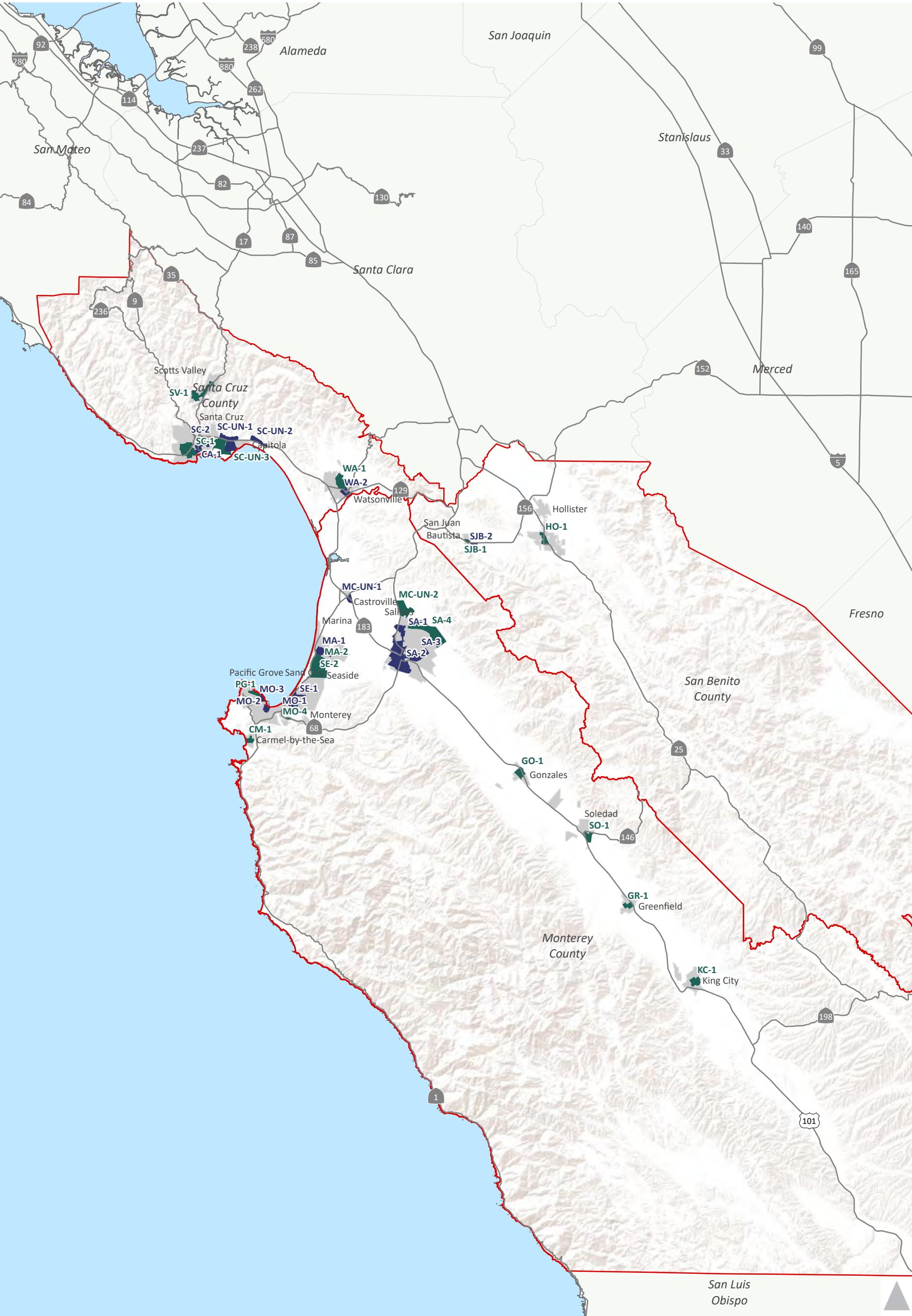
- T-1 Town Single-Family Residential

- T-2 Town Multi-Family Residential
- T-3 Town Commercial
- Non-Urban Place Types
- NU-1 Agriculture
- NU-2 Rural Town Commercial
- NU-4 Exurban and Rural Residential

Other

- IND Industrial/Manufacturing
- INS Institutional/Civic
- OSR Open Space/Recreational
- AT Airport

- Sphere of Influence
- City Limits
- Railroads

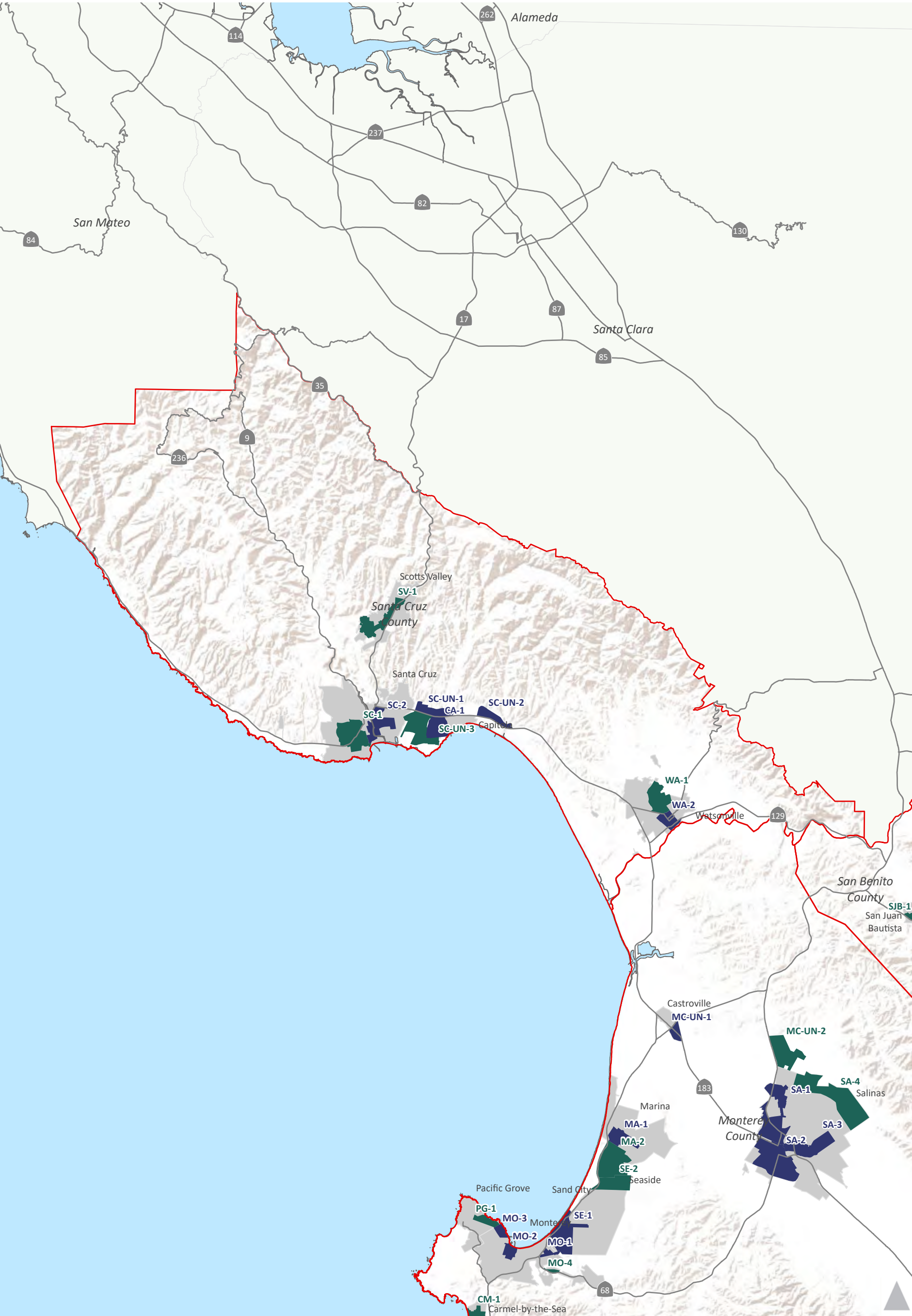


Opportunity Areas

- Existing/Planned Opportunity Areas
- Potential Opportunity Areas
- AMBAG Region
- City of Census Designated Place (CDP) Boundaries

25 Miles

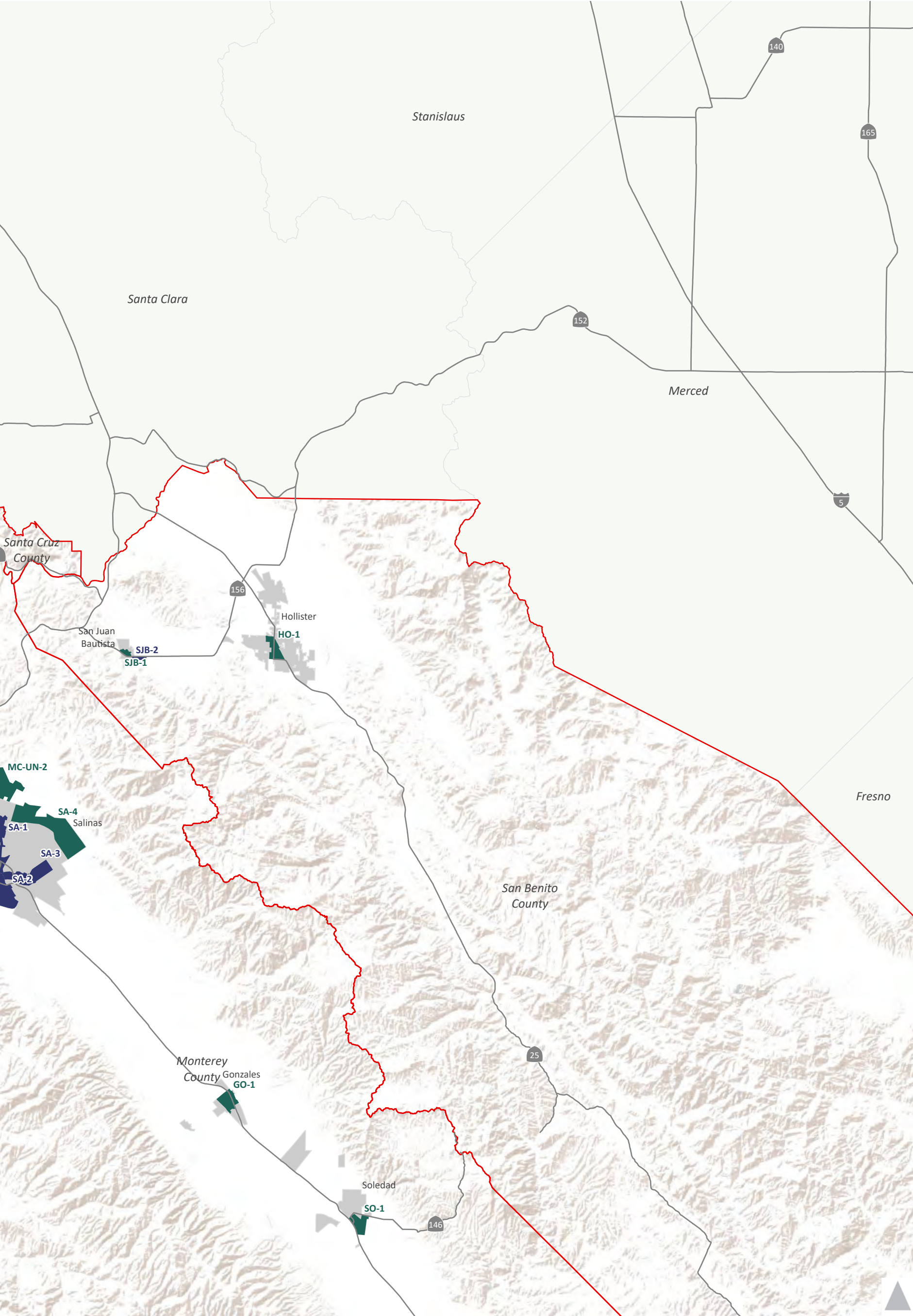
Figure 1
AMBAG Region Opportunity Area Locations



Opportunity Areas

- Existing/Planned Opportunity Areas
- Potential Opportunity Areas
- AMBAG Region
- City of Census Designated Place (CDP) Boundaries

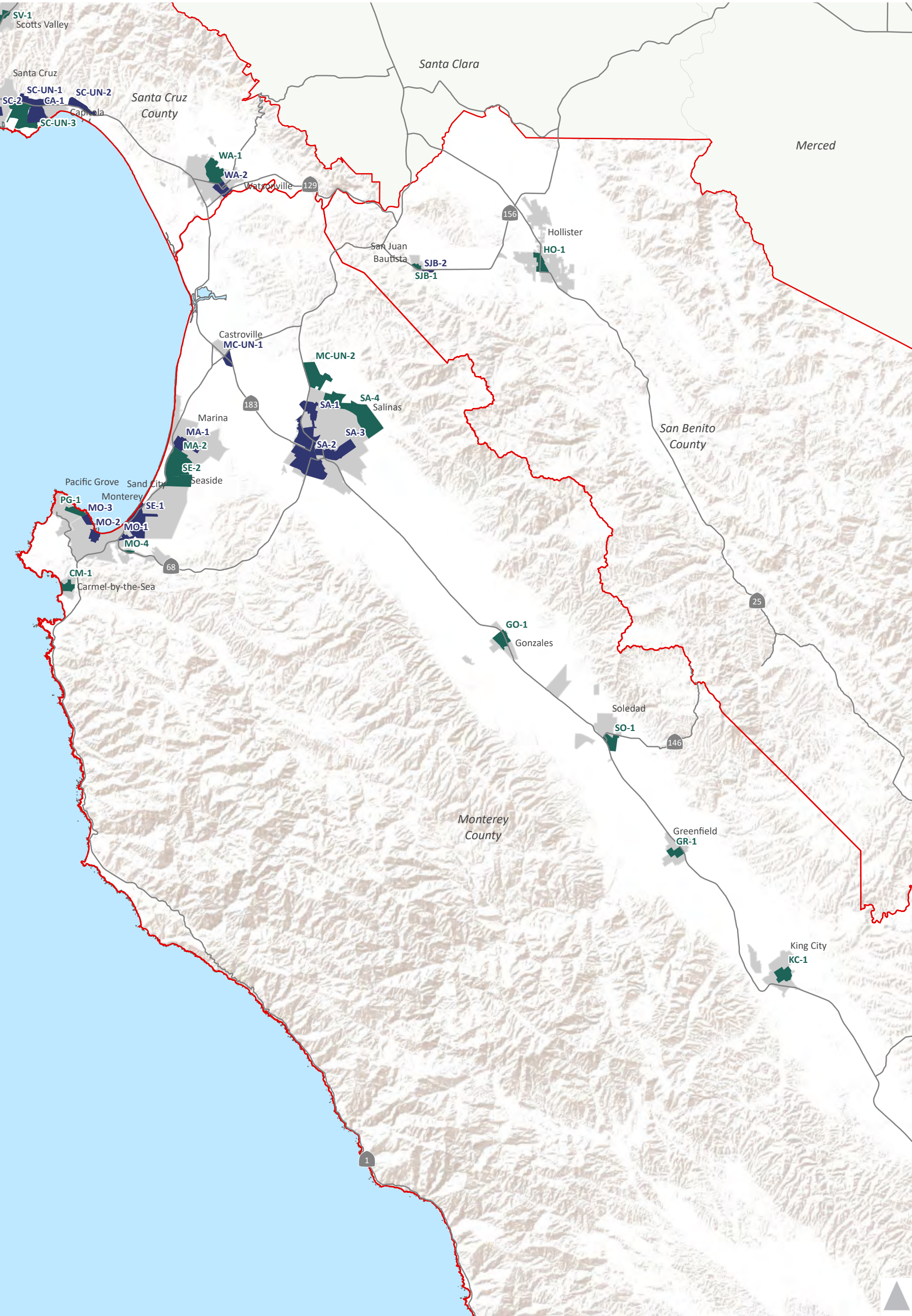
Figure 2
Santa Cruz County Opportunity Area Locations



Opportunity Areas

- Existing/Planned Opportunity Areas
- Potential Opportunity Areas
- AMBAG Region
- City of Census Designated Place (CDP) Boundaries

Figure 3
San Benito County Opportunity Area Locations

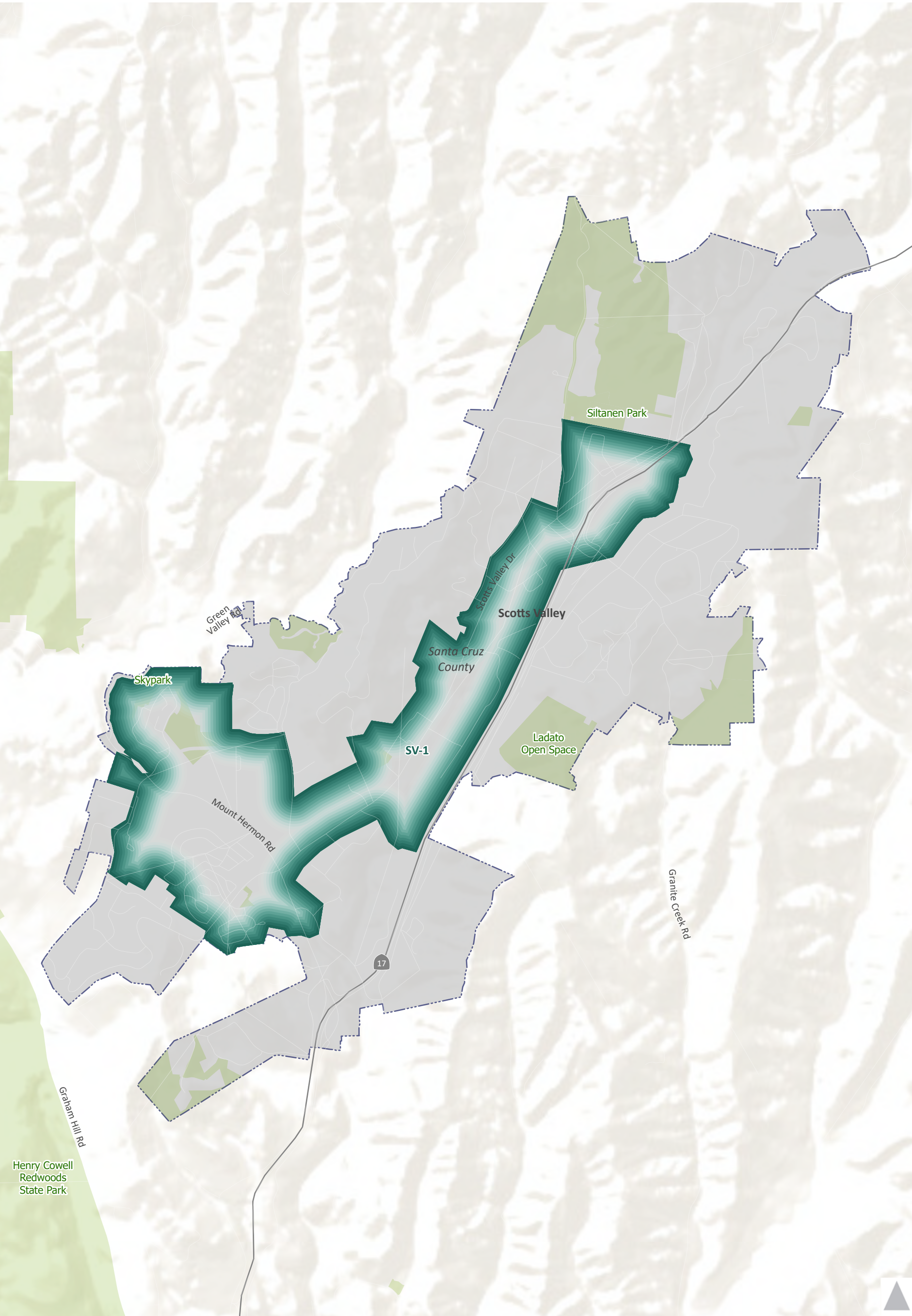


Opportunity Areas

- Existing/Planned Opportunity Areas
- Potential Opportunity Areas
- AMBAG Region
- City of Census Designated Place (CDP) Boundaries

10 Miles

Figure 4
Monterey County Opportunity Area Locations

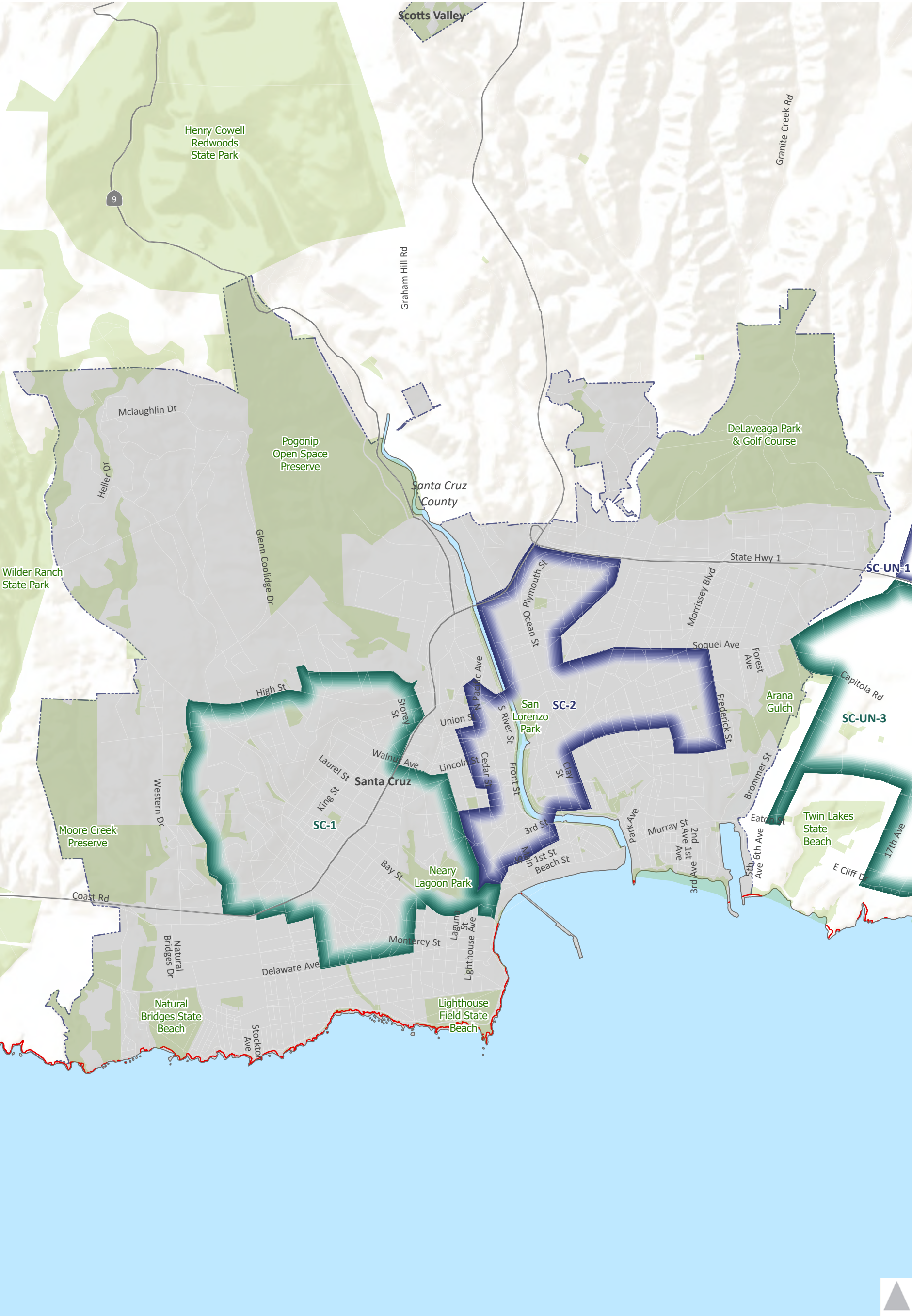


Opportunity Areas

- Existing/Planned Opportunity Areas
- Potential Opportunity Areas
- AMBAG Region
- City of Census Designated Place (CDP) Boundaries
- Unincorporated Areas

1 Miles

Figure 5
City of Scotts Valley Opportunity Area Locations

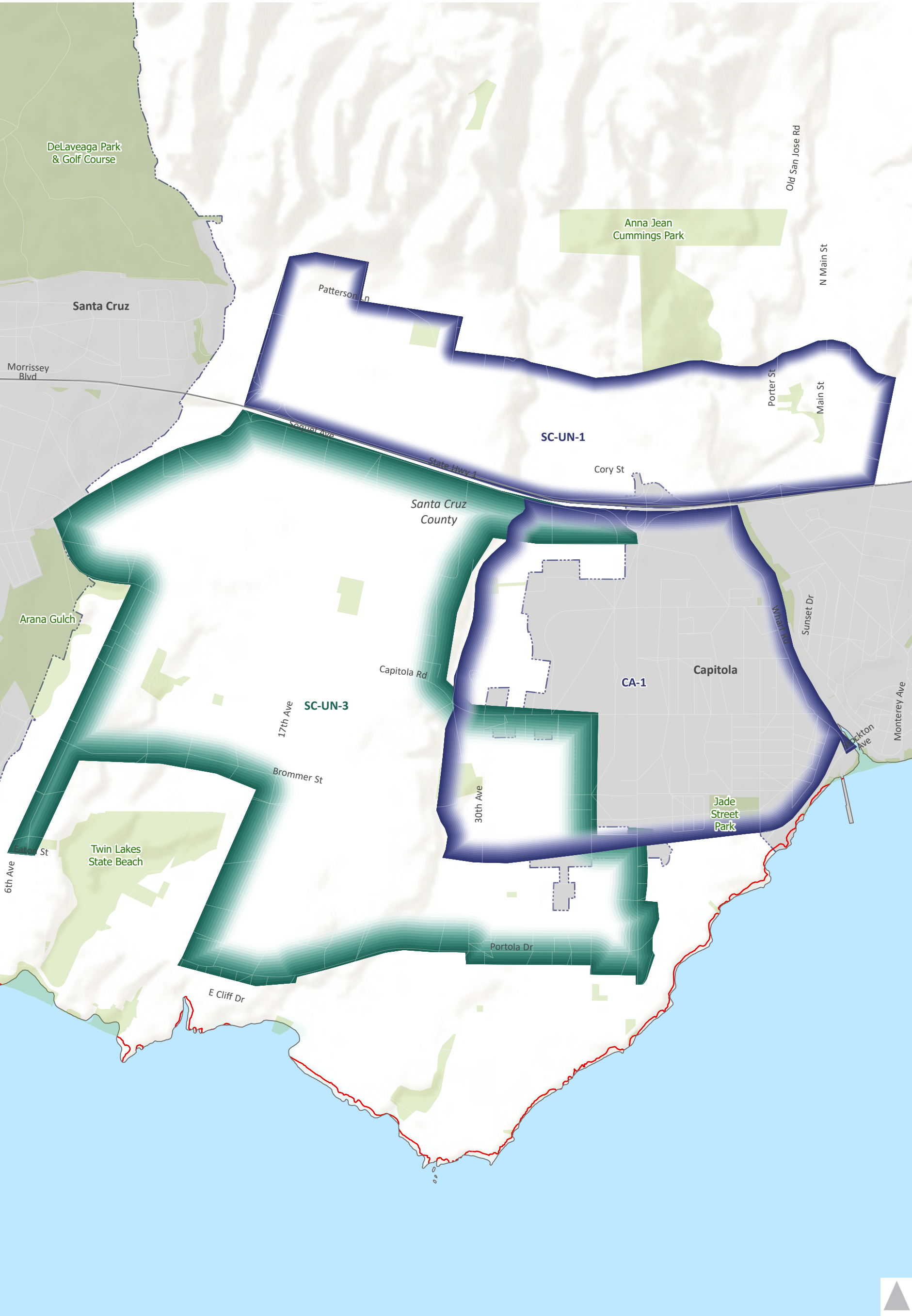


Opportunity Areas

- Existing/Planned Opportunity Areas
- Potential Opportunity Areas
- AMBAG Region
- City of Census Designated Place (CDP) Boundaries
- Unincorporated Areas

1.5 Miles

Figure 6
City of Santa Cruz Opportunity Area Locations

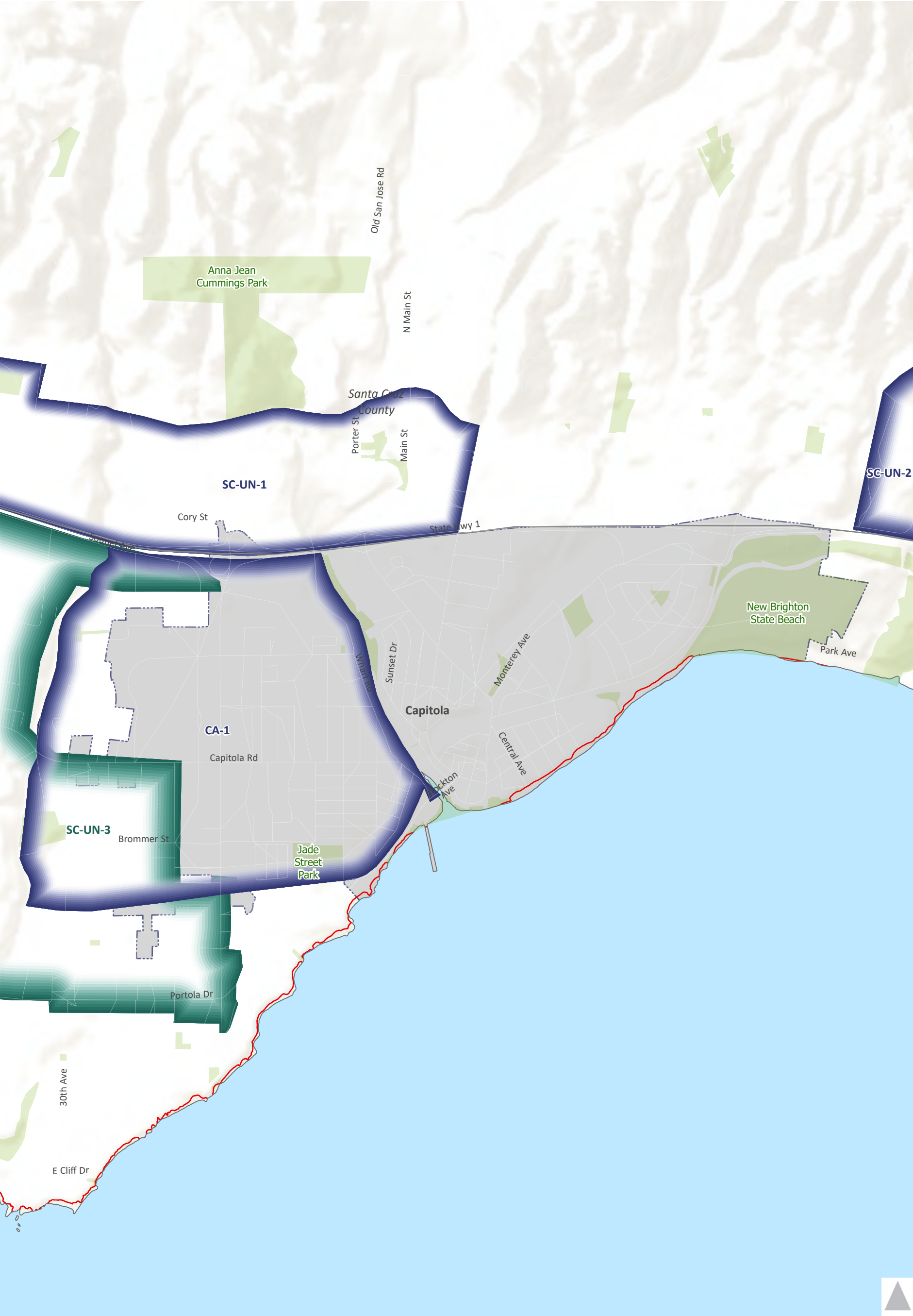


Opportunity Areas

- Existing/Planned Opportunity Areas
- Potential Opportunity Areas
- AMBAG Region
- City of Census Designated Place (CDP) Boundaries
- Unincorporated Areas

County of Santa Cruz Unincorporated Opportunity Area Locations (A)

Figure 7



Opportunity Areas

- Existing/Planned Opportunity Areas
- Potential Opportunity Areas
- AMBAG Region
- City of Census Designated Place (CDP) Boundaries
- Unincorporated Areas

Figure 8
City of Capitola Opportunity Area Locations

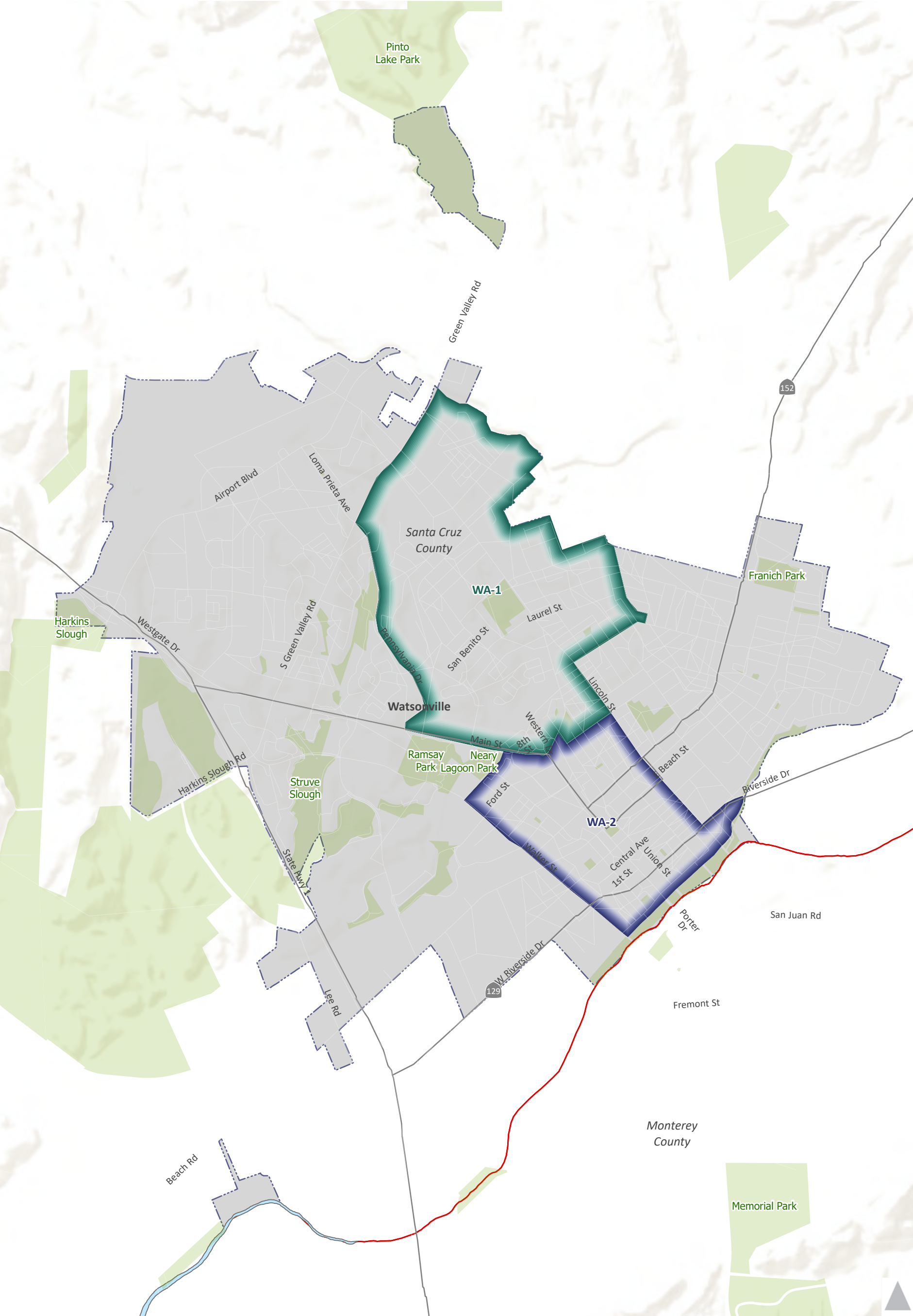


Opportunity Areas

- Existing/Planned Opportunity Areas
- Potential Opportunity Areas
- AMBAG Region
- City of Census Designated Place (CDP) Boundaries
- Unincorporated Areas

1 Miles

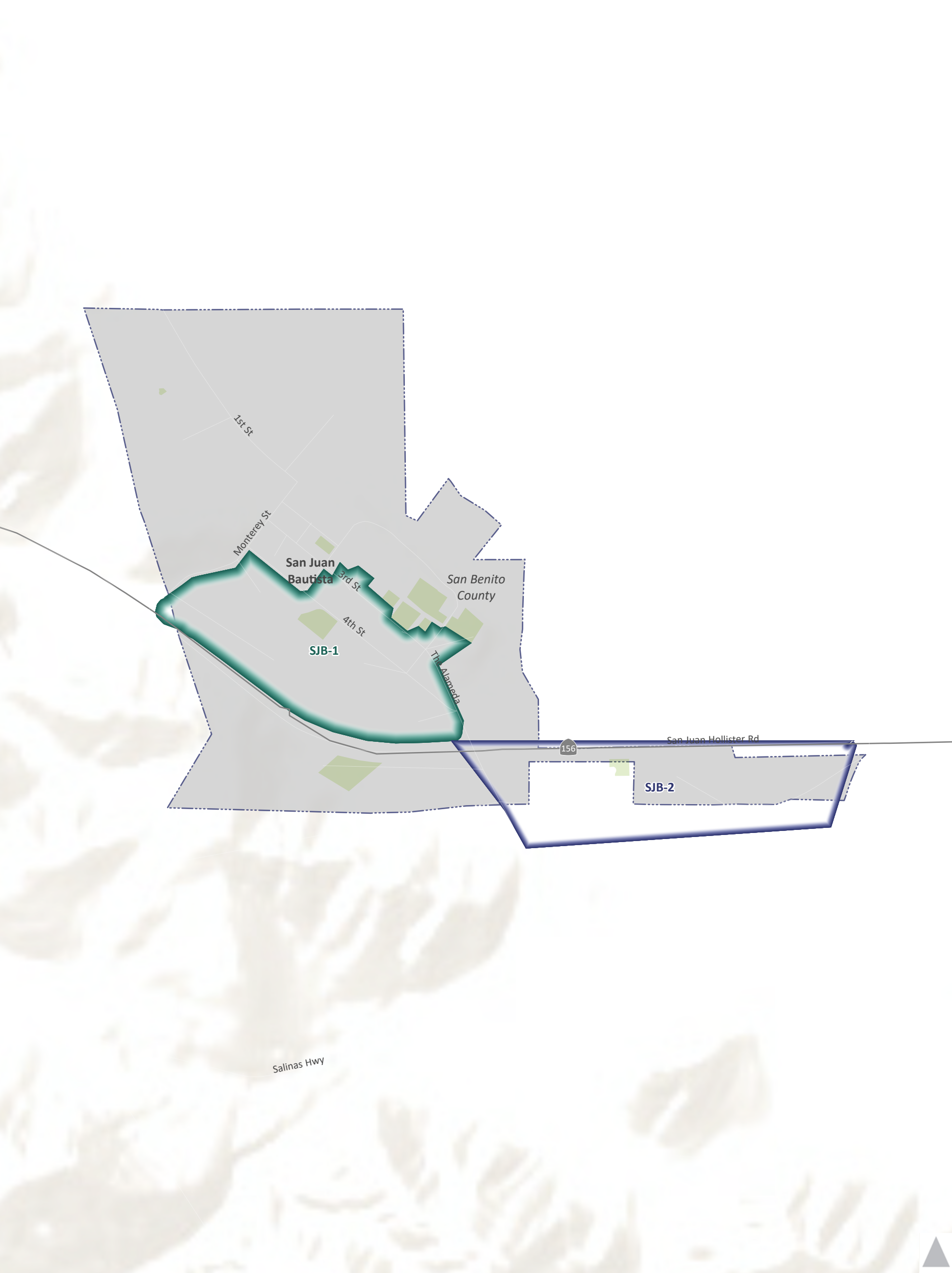
Figure 9
County of Santa Cruz Unincorporated Opportunity Area Locations (B)



Opportunity Areas

- Existing/Planned Opportunity Areas
- Potential Opportunity Areas
- AMBAG Region
- City of Census Designated Place (CDP) Boundaries
- Unincorporated Areas

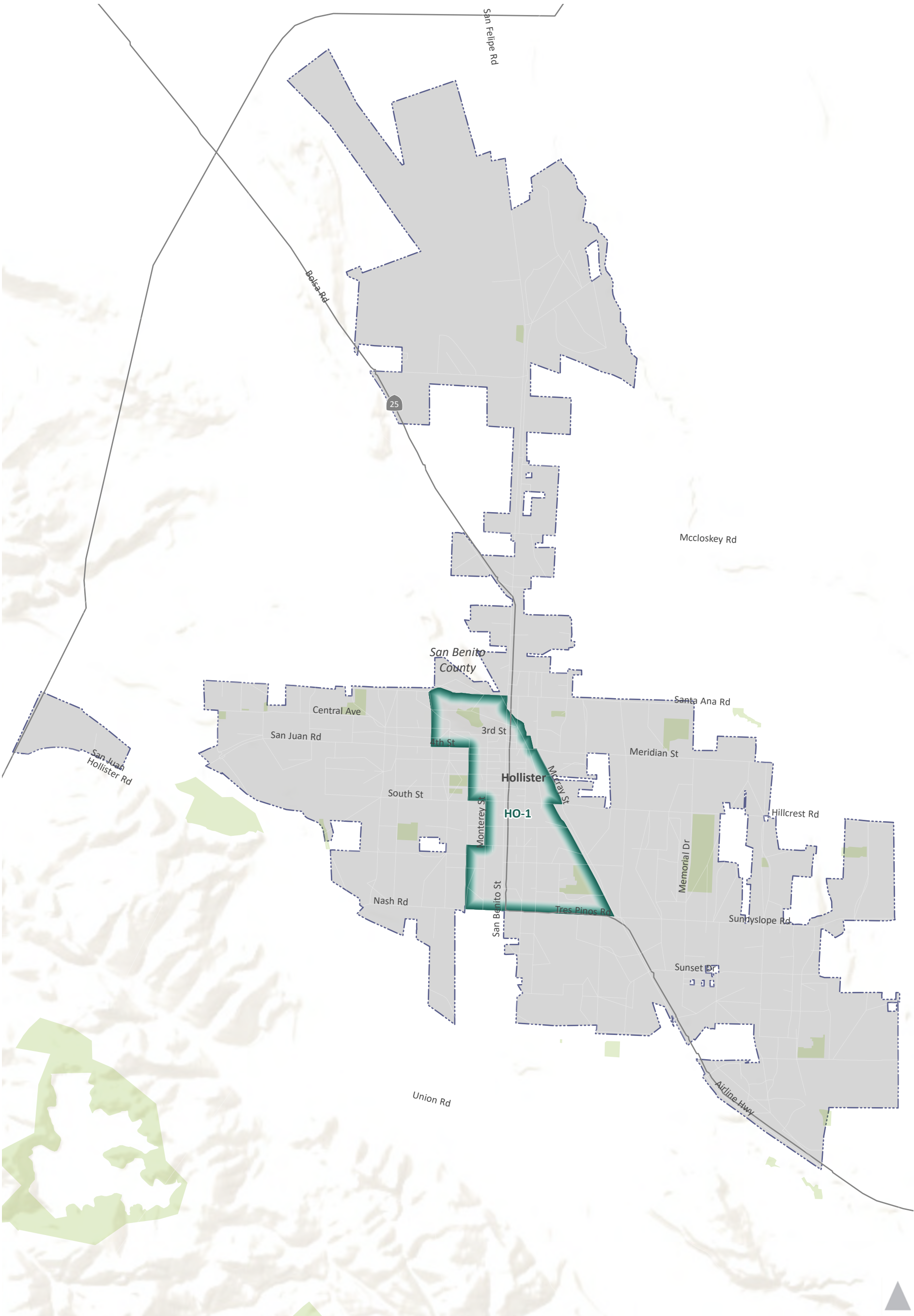
Figure 10
City of Watsonville Opportunity Area Locations



Opportunity Areas

- Existing/Planned Opportunity Areas
- Potential Opportunity Areas
- AMBAG Region
- City of Census Designated Place (CDP) Boundaries
- Unincorporated Areas

Figure 11
City of San Juan Bautista Opportunity Area Locations



Opportunity Areas

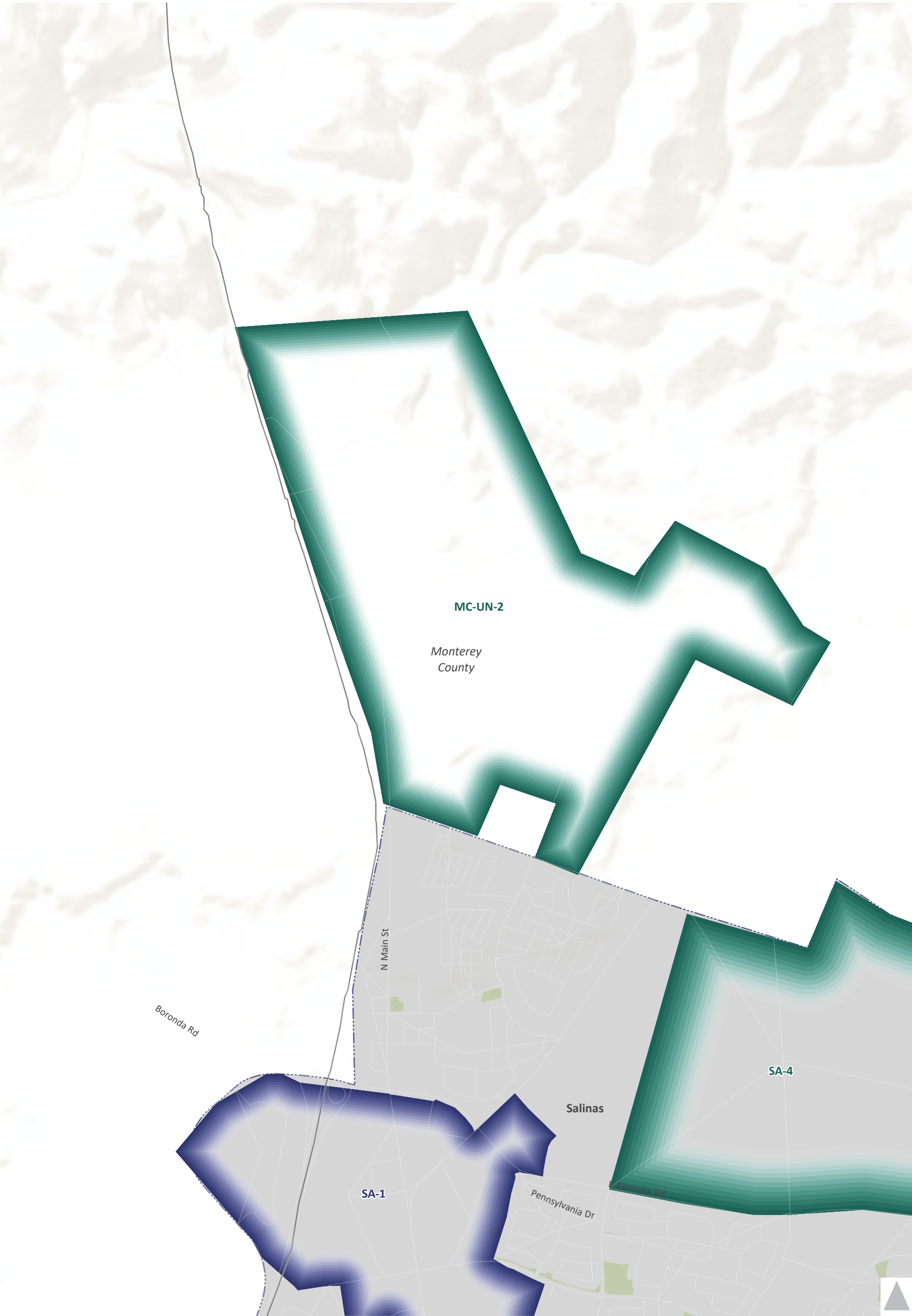
- Existing/Planned Opportunity Areas
- Potential Opportunity Areas
- AMBAG Region
- City of Census Designated Place (CDP) Boundaries
- Unincorporated Areas

Figure 12
City of Hollister Opportunity Area Locations



- Opportunity Areas**
- Existing/Planned Opportunity Areas
 - Potential Opportunity Areas
 - AMBAG Region
 - City of Census Designated Place (CDP) Boundaries
 - Unincorporated Areas

Figure 13
 Monterey County Unincorporated Opportunity Area Locations

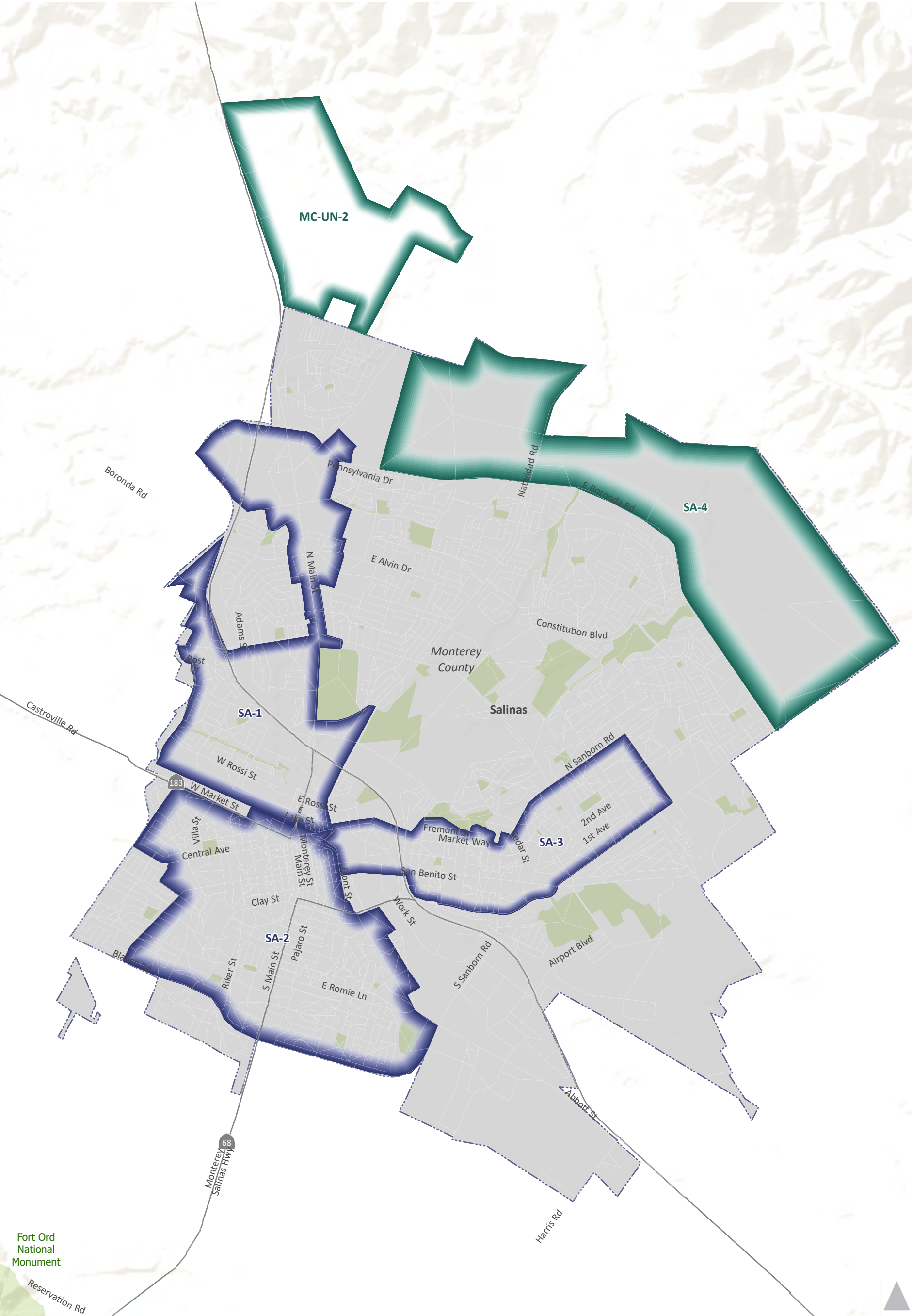


Opportunity Areas

- Existing/Planned Opportunity Areas
- Potential Opportunity Areas
- AMBAG Region
- City of Census Designated Place (CDP) Boundaries
- Unincorporated Areas

Figure 14

Monterey County Unincorporated Opportunity Area Locations

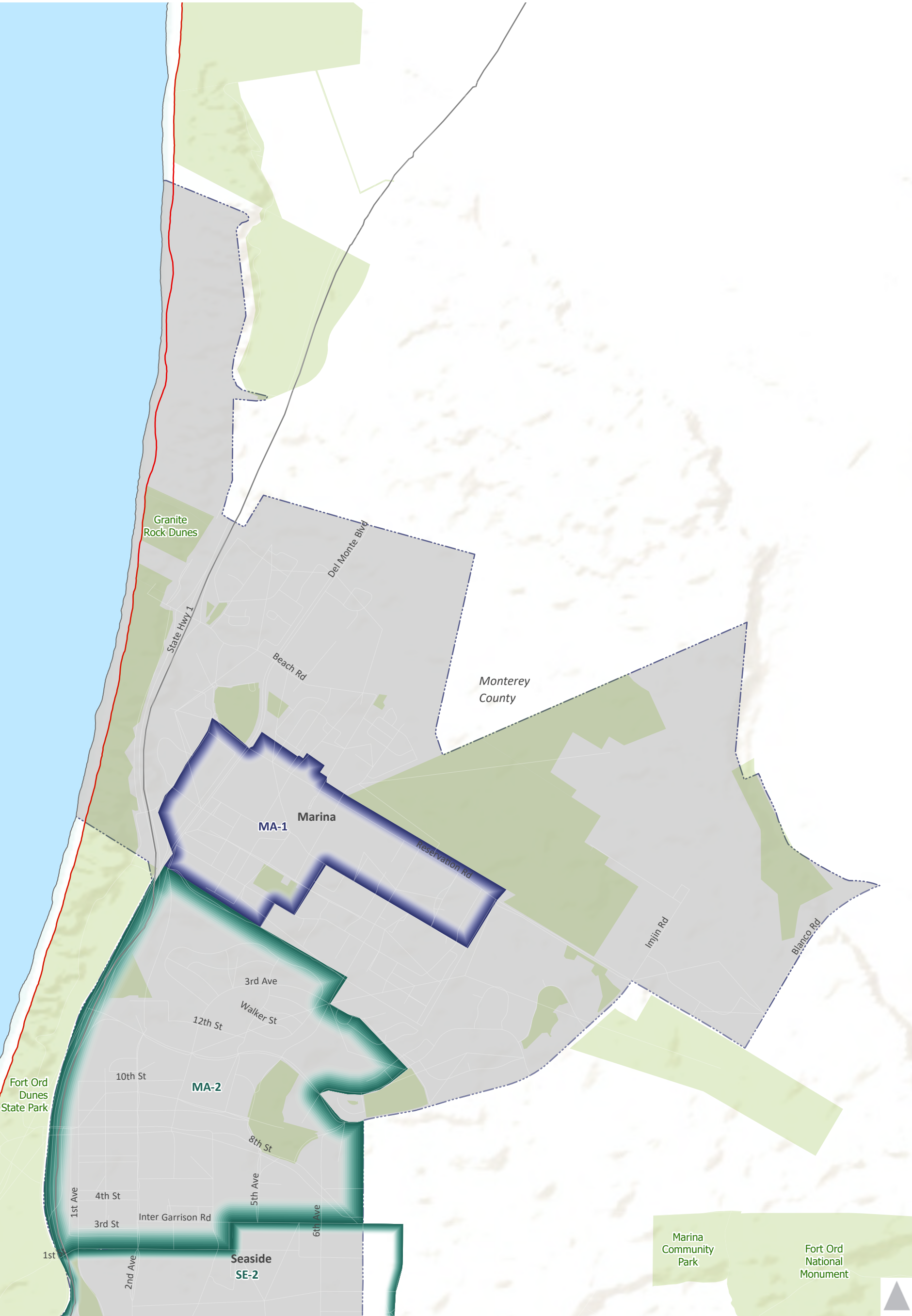


Opportunity Areas

-  Existing/Planned Opportunity Areas
-  Potential Opportunity Areas
-  AMBAG Region
-  City of Census Designated Place (CDP) Boundaries
-  Unincorporated Areas

2.5 Miles

Figure 15
City of Salinas Opportunity Area Locations

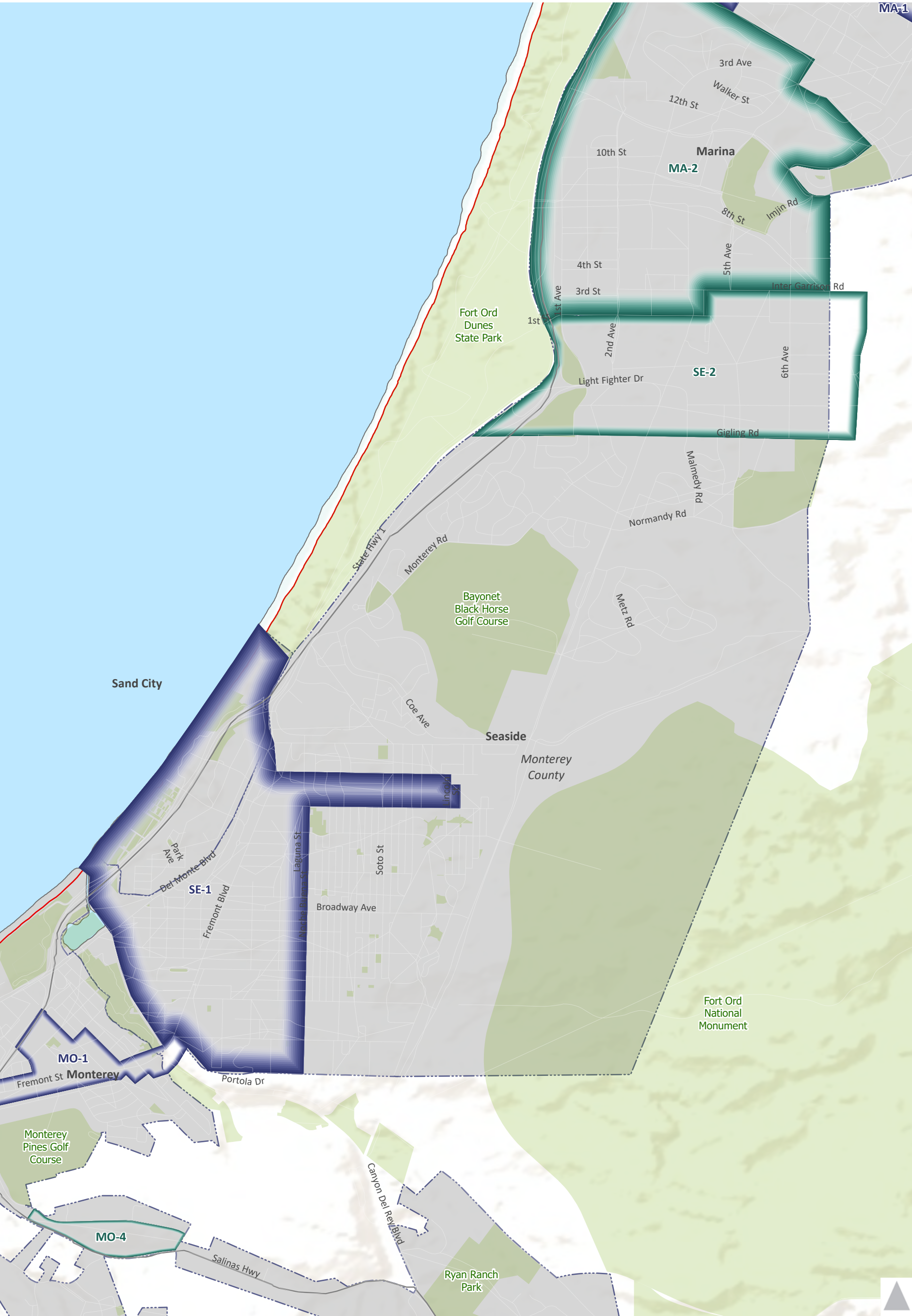


Opportunity Areas

- Existing/Planned Opportunity Areas
- Potential Opportunity Areas
- AMBAG Region
- City of Census Designated Place (CDP) Boundaries
- Unincorporated Areas

1.5 Miles

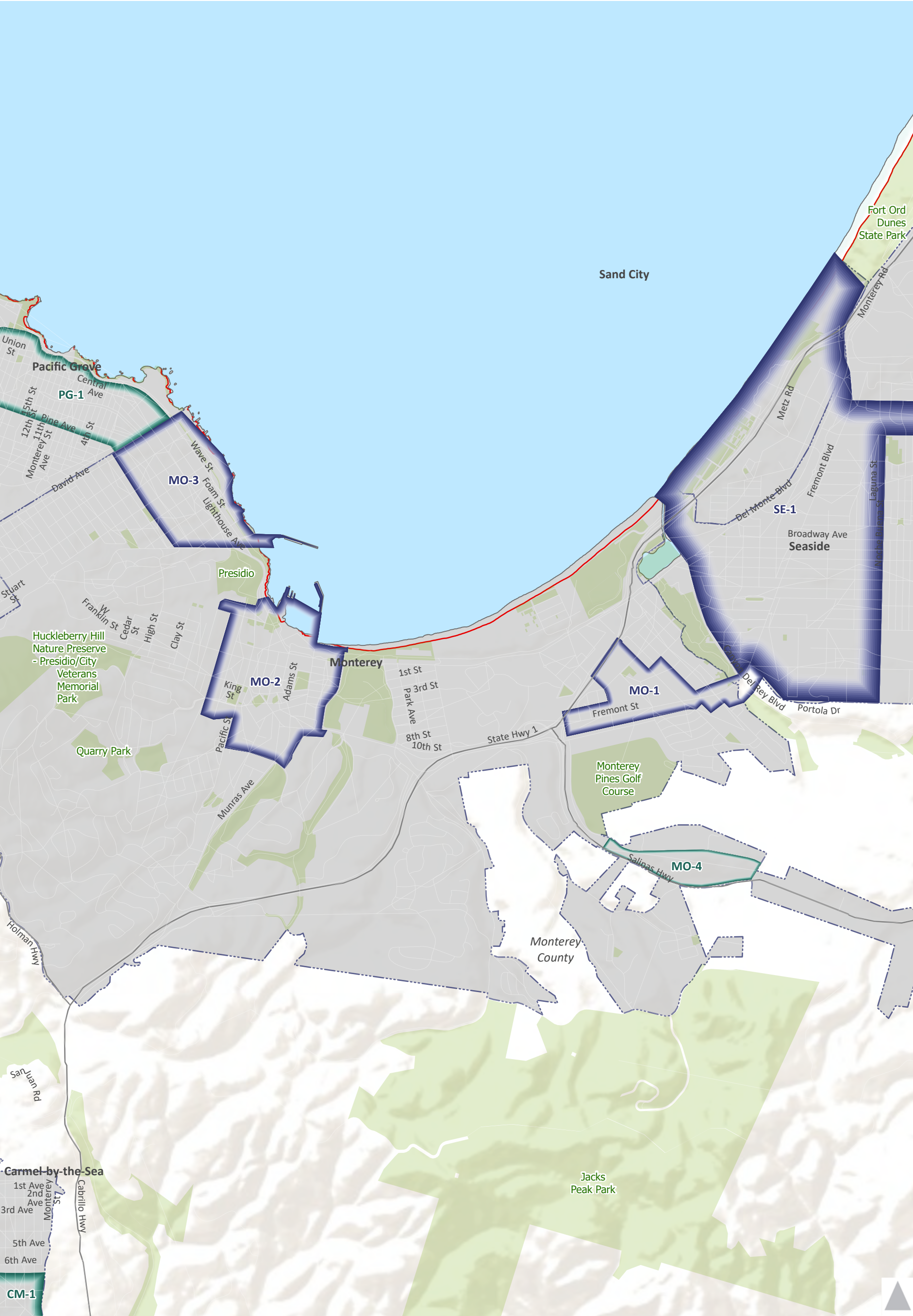
Figure 16
City of Marina Opportunity Area Locations



Opportunity Areas

- Existing/Planned Opportunity Areas
- Potential Opportunity Areas
- AMBAG Region
- City of Census Designated Place (CDP) Boundaries
- Unincorporated Areas

Figure 17
City of Seaside Opportunity Area Locations



- Opportunity Areas**
- Existing/Planned Opportunity Areas
 - Potential Opportunity Areas
 - AMBAG Region
 - City of Census Designated Place (CDP) Boundaries
 - Unincorporated Areas

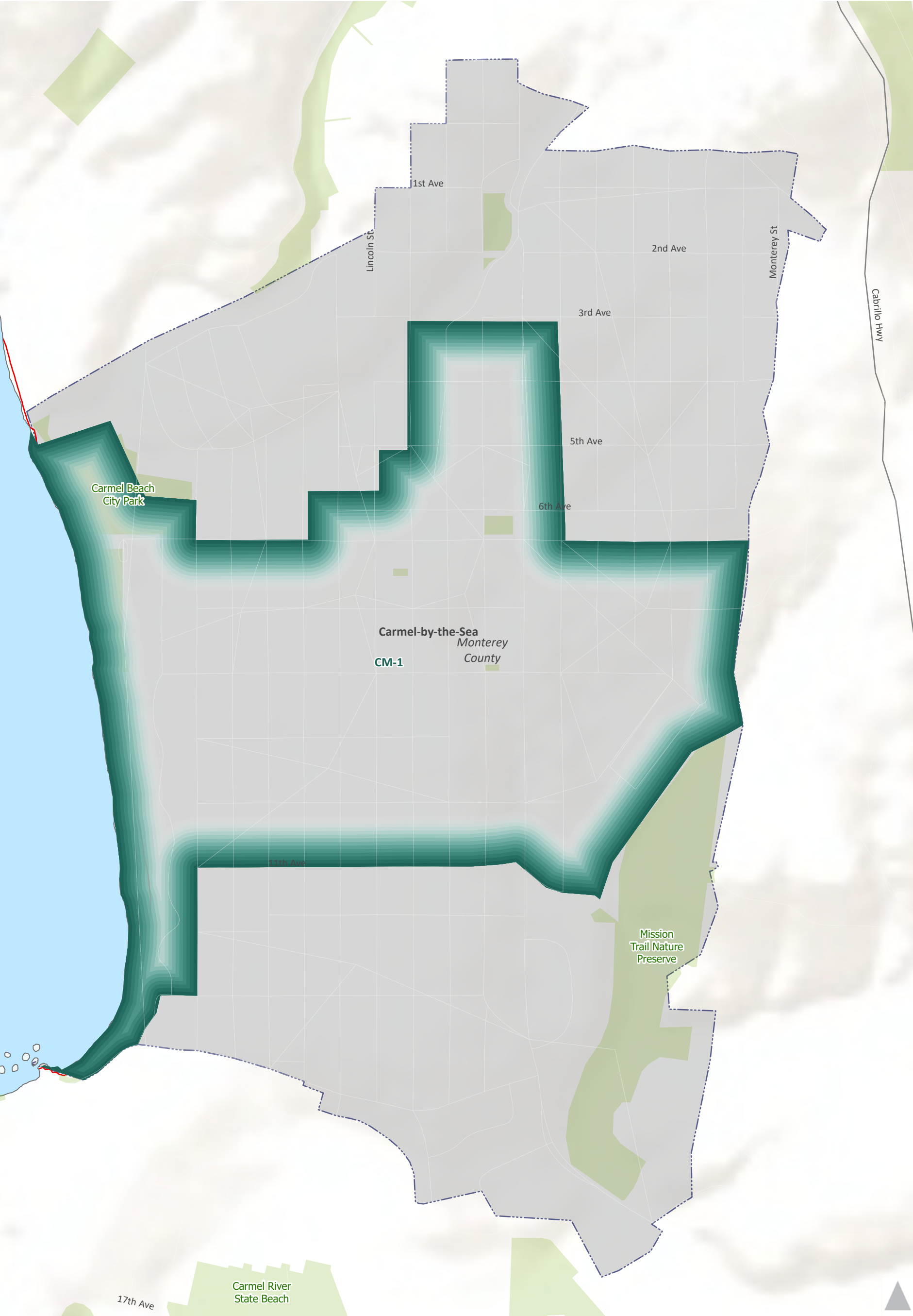
Figure 18
City of Monterey Opportunity Area Locations



Opportunity Areas

- Existing/Planned Opportunity Areas
- Potential Opportunity Areas
- AMBAG Region
- City of Census Designated Place (CDP) Boundaries
- Unincorporated Areas

Figure 19
City of Pacific Grove Opportunity Area Locations



Opportunity Areas

- Existing/Planned Opportunity Areas
- Potential Opportunity Areas
- AMBAG Region
- City of Census Designated Place (CDP) Boundaries
- Unincorporated Areas

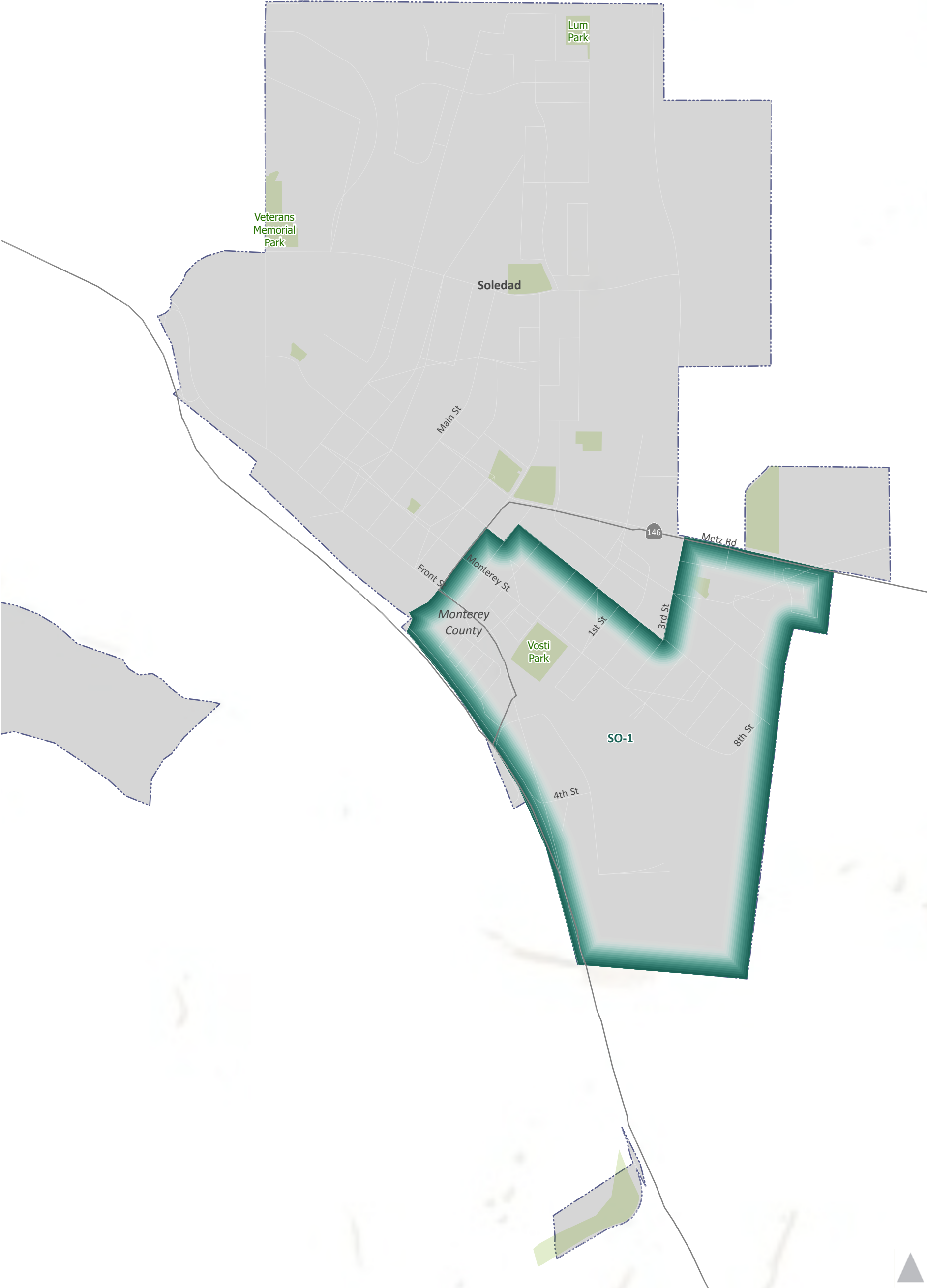
Figure 20
City of Carmel-by-the-Sea Opportunity Area Locations



Opportunity Areas

-  Existing/Planned Opportunity Areas
-  Potential Opportunity Areas
-  AMBAG Region
-  City of Census Designated Place (CDP) Boundaries
-  Unincorporated Areas

Figure 21
City of Gonzales Opportunity Area Locations



Opportunity Areas

- Existing/Planned Opportunity Areas
- Potential Opportunity Areas
- AMBAG Region
- City of Census Designated Place (CDP) Boundaries
- Unincorporated Areas

Figure 22
City of Soledad Opportunity Area Locations



Opportunity Areas

- Existing/Planned Opportunity Areas
- Potential Opportunity Areas
- AMBAG Region
- City of Census Designated Place (CDP) Boundaries
- Unincorporated Areas

1 Miles

Figure 23
City of Greenfield Opportunity Area Locations



Opportunity Areas

- Existing/Planned Opportunity Areas
- Potential Opportunity Areas
- AMBAG Region
- City of Census Designated Place (CDP) Boundaries
- Unincorporated Areas

Figure 24
City of King City Opportunity Area Locations



J

MTP Checklist

Introduction

The 2017 Regional Transportation Plan (RTP) Guidelines includes a checklist that the Metropolitan Planning Organization is required to complete upon finalizing the long range transportation plan. The purpose of the RTP Checklist is to establish a minimum standard for developing the RTP. The checklist of transportation planning requirements has been updated in order to conform to federal and state RTP requirements. It is completed and included as an attachment to this Appendix for the 2045 MTP/SCS.

J

Attachments

Regional Transportation Plan Checklist for MPOs

(Revised March 2018)

(To be completed electronically in Microsoft Word format by the MPO and submitted along with the draft and final RTP to Caltrans)

Name of MPO: Association of Monterey Bay Area of Governments

Date Draft RTP Completed: November 2021

RTP Adoption Date: June 15, 2022 (scheduled)

What is the Certification Date of the Environmental Document (ED)? June 15, 2022 (scheduled)

Is the ED located in the RTP or is it a separate document? Separate

By completing this checklist, the MPO verifies the RTP addresses all of the following required information within the RTP.

Regional Transportation Plan Contents

General

	Yes/No	Page #
1. Does the RTP address no less than a 20-year planning horizon? (23 CFR 450.324(a))	Yes	1-4
2. Does the RTP include both long-range and short-range strategies/actions? (23 CFR 450.324(b))	Yes	Chapters 2 & 4
3. Does the RTP address issues specified in the policy, action and financial elements identified in California Government Code Section 65080?	Yes	Chapters 2, 3 & 4
4. Does the RTP address the 10 issues specified in the Sustainable Communities Strategy (SCS) component as identified in Government Code Sections 65080(b)(2)(B) and 65584.04(i)(1)?		
a. Identify the general location of uses, residential densities, and building intensities within the region?	Yes	4-6
b. Identify areas within the region sufficient to house all the population of the region, including all economic segments of the population over the course of the planning period of the regional transportation plan taking into account net migration into the region, population growth, household formation and employment growth?	Yes	4-37

c. Identify areas within the region sufficient to house an eight-year projection of the regional housing need for the region pursuant to Government Code Section 65584?	Yes	4-11, 4-13, 4-15 & 4-17
d. Identify a transportation network to service the transportation needs of the region?	Yes	4-18
e. Gather and consider the best practically available scientific information regarding resource areas and farmland in the region as defined in subdivisions (a) and (b) of Government Code Section 65080.01?	Yes	4-28
f. Consider the state housing goals specified in Sections 65580 and 65581?	Yes	4-37
g. Utilize the most recent planning assumptions, considering local general plans and other factors?	Yes	4-6
h. Set forth a forecasted development pattern for the region, which, when integrated with the transportation network, and other transportation measures and policies, will reduce the greenhouse gas emissions from automobiles and light trucks to achieve, if there is a feasible way to do so, the greenhouse gas emission reduction targets approved by the ARB?	Yes	4-6 and 4-38
i. Provide consistency between the development pattern and allocation of housing units within the region (Government Code 65584.04(i)(1)?	Yes	4-37
j. Allow the regional transportation plan to comply with Section 176 of the federal Clean Air Act (42 U.S.C. Section 7506)?	Yes	1-10
5. Does the RTP include Project Intent i.e. Plan Level Purpose and Need Statements?	Yes	1-10
6. Does the RTP specify how travel demand modeling methodology, results and key assumptions were developed as part of the RTP process? (Government Code 14522.2)	Yes	Appendix F
7. Does the RTP contain a System Performance Report? (23 CFR 450.324 (f))		
a. Does the report include a description of the performance measures and performance targets used in assessing the performance of the transportation system?	Yes	Chapter 5 and Appendix G
b. Does the report show the progress achieved in meeting performance targets in comparison with the performance in previous reports?	Yes	Appendix G
c. Does the report include an evaluation of how the preferred scenario has improved conditions and performance, where applicable?	Yes	Chapter 5 and Appendix G
d. Does the report include an evaluation of how local policies and investments have impacted costs necessary to achieve identified performance targets, where applicable?	Yes	Chapter 5 and Appendix G

Consultation/Cooperation

	Yes/No	Page #
1. Does the RTP contain a public involvement program that meets the requirements of Title 23, CFR 450.316(a)?		
a. Providing adequate public notice of public participation activities and time for public review and comment at key decision points, including a reasonable opportunity to comment on the proposed metropolitan transportation plan and the TIP;	Yes	Chapter 6 & Appendix D
b. Providing timely notice and reasonable access to information about transportation issues and processes;	Yes	Chapter 6 & Appendix D
c. Employing visualization techniques to describe metropolitan transportation plans and TIPs;	Yes	Chapter 6 & Appendix D
d. Making public information (technical information and meeting notices) available in electronically accessible formats and means, such as the World Wide Web;	Yes	Chapter 6 & Appendix D
e. Holding any public meetings at convenient and accessible locations and times;	Yes	Chapter 6 & Appendix D
f. Demonstrating explicit consideration and response to public input received during the development of the metropolitan transportation plan and the TIP;	Yes	Chapter 6 & Appendix D
g. Seeking out and considering the needs of those traditionally underserved by existing transportation systems, such as low-income and minority households, who may face challenges accessing employment and other services;	Yes	Chapter 6 & Appendix D
h. Providing an additional opportunity for public comment, if the final metropolitan transportation plan or TIP differs significantly from the version that was made available for public comment by the MPO and raises new material issues that interested parties could not reasonably have foreseen from the public involvement efforts;	Yes	Chapter 6 & Appendix D
i. Coordinating with the statewide transportation planning public involvement and consultation processes under subpart B of this part; and	Yes	Chapter 6 & Appendix D
j. Periodically reviewing the effectiveness of the procedures and strategies contained in the participation plan to ensure a full and open participation process.	Yes	Chapter 6 & Appendix D
2. Does the RTP contain a summary, analysis, and report on the disposition of significant written and oral comments received on the draft metropolitan transportation plan as part of the final metropolitan transportation plan and TIP that meets the requirements of 23 CFR 450.316(a)(2), as applicable?	Yes	Appendix K
3. Did the MPO/RTPA consult with the appropriate State and local representatives including representatives from environmental and	Yes	D-6

economic communities; airport; transit; freight during the preparation of the RTP? (23 CFR 450.316(b))

4.	Did the MPO/RTPA who has federal lands within its jurisdictional boundary involve the federal land management agencies during the preparation of the RTP? (23 CFR 450.316(d))	Yes 4-32
5.	Where does the RTP specify that the appropriate State and local agencies responsible for land use, natural resources, environmental protection, conservation and historic preservation consulted? (23 CFR 450.324(g))	Yes 4-28 to 4-38
6.	Did the RTP include a comparison with the California State Wildlife Action Plan and (if available) inventories of natural and historic resources? (23 CFR 450.324(g)(1&2))	Yes 4-37
7.	Did the MPO/RTPA who has a federally recognized Native American Tribal Government(s) and/or historical and sacred sites or subsistence resources of these Tribal Governments within its jurisdictional boundary address tribal concerns in the RTP and develop the RTP in consultation with the Tribal Government(s)? (23 CFR 450.316(c))	Yes Chapter 6 & Appendix D
8.	Does the RTP address how the public and various specified groups were given a reasonable opportunity to comment on the plan using the participation plan developed under 23 CFR part 450.316(a)? (23 CFR 450.316(a)(i))	Yes 6-6 to 6-7
9.	Does the RTP contain a discussion describing the private sector involvement efforts that were used during the development of the plan? (23 CFR 450.316(a))	Yes 6-7
10.	Does the RTP contain a discussion describing the coordination efforts with regional air quality planning authorities? (23 CFR 450.316(a)(2)) (MPO nonattainment and maintenance areas only)	Yes/No Page # N/A
11.	Is the RTP coordinated and consistent with the Public Transit-Human Services Transportation Plan? (23 CFR 450.306(h))	Yes 2-10
12.	Were the draft and adopted RTP posted on the Internet? (23 CFR 450.324(k))	Yes 6-3 & 6-5
13.	Did the RTP explain how consultation occurred with locally elected officials? (Government Code 65080(D))	Yes 6-5

14. Did the RTP outline the public participation process for the sustainable communities strategy? (Government Code 65080(E))
15. Was the RTP adopted on the estimated date provided in writing to State Department of Housing and Community Development to determine the Regional Housing Need Allocation and planning period (start and end date) and align the local government housing element planning period (start and end date) and housing element adoption due date 18 months from RTP adoption date? (Government Code 65588(e)(5))

Yes	Chapter 6 & Appendix D
Yes	4-37 & 4-38

Title VI and Environmental Justice

1. Does the public participation plan describe how the MPO will seek out and consider the needs of those traditionally underserved by existing transportation system, such as low-income and minority households, who may face challenges accessing employment and other services? (23 CFR 450.316 (a)(1)(vii))
2. Has the MPO conducted a Title VI analysis that meets the legal requirements described in Section 4.2?
3. Has the MPO conducted an Environmental Justice analysis that meets the legal requirements described in Section 4.2?

Yes	Chapter 5, 6-8
Yes	5-4, 5-5, 5-11, 5-13, 5-15 & 5-17
Yes	5-4, 5-5, 5-6, 5-7, 5-8, 5-9, 5-16 & 5-17

Modal Discussion

1. Does the RTP discuss intermodal and connectivity issues?
2. Does the RTP include a discussion of highways?
3. Does the RTP include a discussion of mass transportation?
4. Does the RTP include a discussion of the regional airport system?
5. Does the RTP include a discussion of regional pedestrian needs?

Yes/No	Page #
Yes	2-10, 2-24, 2-25
Yes	2-4
Yes	2-6
Yes	2-16, 2-18, 2-19, 2-21, 3-5, 3-7 & 3-8
Yes	2-12 & 2-13

6. Does the RTP include a discussion of regional bicycle needs?
7. Does the RTP address the California Coastal Trail? (Government Code 65080.1) (For MPOs and RTPAs located along the coast only)
8. Does the RTP include a discussion of rail transportation?
9. Does the RTP include a discussion of maritime transportation (if appropriate)?
10. Does the RTP include a discussion of goods movement?

Yes	2-12
Yes	2-14, 2-15 & 2-16
Yes	2-11
N/A	
Yes	2-21

Programming/Operations

1. Is the RTP consistent (to the maximum extent practicable) with the development of the regional ITS architecture? (23 CFR 450.306(g))
2. Does the RTP identify the objective criteria used for measuring the performance of the transportation system?
3. Does the RTP contain a list of un-constrained projects?

Yes	2-26
Yes	Chapter 5
Yes	Appendix C

Financial

1. Does the RTP include a financial plan that meets the requirements identified in 23 CFR part 450.324(f)(11)?
2. Does the RTP contain a consistency statement between the first 4 years of the fund estimate and the 4-year STIP fund estimate? (65080(b)(4)(A))
3. Do the projected revenues in the RTP reflect Fiscal Constraint? (23 CFR part 450.324(f)(11)(ii))
4. Does the RTP contain a list of financially constrained projects? Any regionally significant projects should be identified. (Government Code 65080(4)(A))
5. Do the cost estimates for implementing the projects identified in the RTP reflect "year of expenditure dollars" to reflect inflation rates? (23 CFR part 450.324(f)(11)(iv))
6. After 12/11/07, does the RTP contain estimates of costs and revenue sources that are reasonably expected to be available to operate and maintain the freeways, highway and transit within the region? (23 CFR 450.324(f)(11)(i))

Yes	Chapter 3 & Appendix B
Yes	3-4
Yes	3-8 & 3-12
Yes	Appendix C
Yes	3-8 & 3-12
Yes	Chapter 3 & Appendix B

7. Does the RTP contain a statement regarding consistency between the projects in the RTP and the ITIP? (2016 STIP Guidelines Section 33)
8. Does the RTP contain a statement regarding consistency between the projects in the RTP and the RTIP? (2016 STIP Guidelines Section 19)
9. Does the RTP address the specific financial strategies required to ensure the identified TCMs from the SIP can be implemented? (23 CFR part 450.324(f)(11)(vi) (**nonattainment and maintenance MPOs only**))

Yes	3-4
Yes	3-4
Yes/No	Page #
N/A	

Environmental

1. Did the MPO/RTPA prepare an EIR or a program EIR for the RTP in accordance with CEQA guidelines?
2. Does the RTP contain a list of projects specifically identified as TCMs, if applicable?
3. Does the RTP contain a discussion of SIP conformity, if applicable?
4. Does the RTP specify mitigation activities? (23 CFR part 450.324(f)(10))
5. Where does the EIR address mitigation activities?
6. Did the MPO/RTPA prepare a Negative Declaration or a Mitigated Negative Declaration for the RTP in accordance with CEQA guidelines?
7. Does the RTP specify the TCMs to be implemented in the region? (**federal nonattainment and maintenance areas only**)

Yes	EIR
N/A	
N/A	
Yes	EIR Executive Summary
Yes	EIR ES-8 – ES-52
No	
N/A	

I have reviewed the above information and certify that it is correct and complete.

(Must be signed by MPO Executive Director
or designated representative)

June 8, 2022

Date

Maura Twomey

Print Name

Executive Director

Title



K Draft 2045 MTP/SCS Comments and Responses

Introduction

The 2045 MTP/SCS is the blueprint for a regional transportation system that further enhances our quality of life, promotes sustainability, and offers more mobility options for people and goods. The 2045 MTP/SCS is built on an integrated set of public policies, strategies and investments to maintain, manage and improve the transportation system so it meets the diverse needs of our changing region through 2045.

On November 22, 2021 AMBAG released the Draft 2045 MTP/SCS and the Draft Environmental Impact Report (EIR) for public review and comment. Four public workshops and public hearings were held in January 2022 to facilitate public comment on the Draft 2045 MTP/SCS and Draft EIR.

Generally, the comments received to date on the Draft 2045 MTP/SCS covered the following broad issues:

- Support for/opposition to transportation modes and specific projects
- Comments on the project list
- Comments on the MTP/SCS document and figures
- Comments on sustainability and climate change concerns

The close of the public comment period for the Draft 2045 MTP/SCS and Draft EIR was January 31, 2022. Staff has compiled the comments received on the Draft 2045 MTP/SCS and prepared written responses, which are included as an attachment to this Appendix.

K

Attachments

Draft 2045 MTP/SCS Public Comments and Draft Responses Received During the Public Comment Period

Number	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
1	Public	Pisano	Michael	Transportation Investments (Chapter 2)	I was wondering if you would be so kind as to support a Bus Stop at The Enterprise Technology Center (ETC) in Scotts Valley? I don't know if the MTP/SCS is the proper place for this large ask. Unless adding funding for a Santa Cruz County Multi-Lateral Bus Stop Commission would be appropriate? Background: The ETC has about 1000 cars a day parking in its parking lots. I currently work at the UC Scotts Valley Center at the ETC, and I am asking for support as a Local Citizen. The nearest bus stop to the ETC is by the Kaiser on Scotts Valley Drive - which is an unlit 15-minute hilly walk and deters many from using our Metro to get to the ETC. Your support would be very much appreciated. The Metro counters all ideas with a No. The Metro found a savings of \$94,000 a month by removing two bus routes in Scotts Valley for five students to use. The Felton Fair private property time point bus stop was removed saving between 5to10 minutes in travel time on bus route 35. The very much appreciated Metro Route 35 addition now traverses Scotts Valley drive in both directions to help lower commute times to Live Oak to the ETC from 3-hours to 2.5hrs (by car is ~10 minutes). This bus stop may add 5to10 minutes of time but will reduce a commute by a half-hour from 2.5hrs to 2hrs (from 3hrs to 2hrs - a whole hour saved to be with family sooner). To my understanding, the UC has ~100 students that work at the ETC, and they work less than 20hrs a week. The cost of a Metro On-Demand service at \$8 a day would be \$40 a week. Over the last 5-years we have had many attempts with a Metro approval for a bus stop at the ETC, but budgets cuts, waiting for Measure D & SB1 voter approval, limited drivers, bus drivers fear of missing the Santas Village exit to turn around on Hwy17 all have delayed this much-needed bus stop. We need an answer to help lower our carbon footprint for our County. I think there needs to be a committee brought together of stakeholders consisting of; AMBAG, the Metro, RTC, E&DTAC, ITAC, Caltrans, the City of Scotts Valley, ETC, UCSC, MAC, and the Santa Cruz County Board of Supervisors to help quickly add a bus stop at the ETC, and add pedestrian safety. So by the time we figure out and implement a solution to add a bus stop at the ETC - We will have the Metro drivers trained to use for a bus stop at the ETC. I understand this is a heavy lift, but many solutions are available. Thank you for your time.	Thank you for your comments. Your comments will be shared with SCCRTC staff as they are responsible for updating the project list.	Email	11/18/2021

Draft 2045 MTP/SCS Public Comments and Draft Responses Received During the Public Comment Period

Number	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
2	Public	Pisano	Michael	Transportation Investments (Chapter 2)	"I am asking AMBAG to add the following to the 2045 MTP/SCS; 1. Overhead Crosswalk Lighting – especially needed on Hwy 9 pedestrian crossings – Solar Powered - (LED Overhead Pedestrian Crossing). 2. In pavement lighting fixtures – to help keep pedestrians safe at crosswalks - (Pedestrian information). 3. In Road Warning Lights - (Pedestrian information). 4. Bollards Sensor Activation - (Pedestrian information). 5. More Time Cards – for adding more time for crossing in long crosswalks - (Green Man +). 6.Bike Ramp for Stairs - (Bike Ramp). Please add the proper funding to allow these 6-safety-items to be installed & maintained in Santa Cruz County. #1. LED Overhead Pedestrian Crossing; To overly brighten the crosswalk for a safe crossing; https://carmanah.com/overhead-lighting-crosswalks/ https://www.traffictechnologytoday.com/news/vulnerable-road-users/crosswalk-night-time-safety-system-launched-at-atssa-expo.html https://www.ledpedestriancrossing.com/?gclid=CjwKCAiAt9z-BRBCEiwA_bWv-ANRVy3ZjeEPnY95NnEWifRo-AHhBw4ojRI3JetC7wNes6HX3WCHdhoC2XkQAvD_BwE #2, #3, #4 Pedestrian information; To automatically turn-on crossing lights; https://www.lightguardsystems.com/smart-crosswalk-in-roadway-warning-light-irwl-system/ https://xwalk.com/?gclid=CjwKCAjw7rWKBhAtEiwAJ3CWLHUbm7CJm0OIe7bdvDDQTu-6TfHE-QRviq5JTGCpd9AUsl05Bka3uhoC1GoQAvD_BwE https://lanelight.com/products/pedestrian-crosswalk-lights/ #5 Green Man + https://www.ahtc.sg/green-man-by-lta/ https://youtu.be/0ytbRa0gLOg #6 Bike Ramp:	Thank you for your comments. Your comments will be shared with SCCRTC staff as they are responsible for updating the project list.	Email	11/18/2021

Number	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
3	Public	Pisano	Michael	Transportation Investments (Chapter 2)	Pedestrian Lights on Overpass: I would like to see funding added on the Granite Creek/Hwy17 overpass pedestrian path to have pedestrian lighting added - Scotts Valley is currently approved for improving the pedestrian path & bike lane with the SCCRTC 2021 Consolidated Grant Program – Preliminary Recommendations, but no pedestrian lighting is included. Those that are walking at night from, the large employer of the Enterprise Technology Center in Scotts Valley to the bus stop located on Scotts Valley Drive cannot see where they are walking on the pedestrian path - this would be a well-spent safety upgrade. Blinking Lights on Overpass Crosswalks; I would like to see funding added for blinking lights at the crossing of overpasses. I was visiting family in Mt. View and saw these blinking lights on the Hwy 85 overpass on/off-ramp crosswalks on El Camino Real. For example; Hwy1 & 41st, and Hwy1 & Soquel Drive: The crosswalk on the on-ramp to Hwy1 from Soquel Dr is set back pretty far, and at night it is very hard to see anyone in this area - let alone in the daytime. Adding blinking lights to these areas would be a well-spent safety upgrade. Thank you for your time & consideration.	Thank you for your comments. Your comments will be shared with SCCRTC staff as they are responsible for updating the project list.	Email	11/18/2021
4	Public	Pisano	Michael	Transportation Investments (Chapter 2)	The Metropolitan Transportation Commission (MTC) is developing a single use pass for all transportation options for those counties connected to the San Francisco Bay. Would the MTP/SCS be interested in funding having Santa Cruz County (or our Tri-County area) join the MTC or at least allow use of the Clipper Card Fast-Pass for those using the Amtrak Hwy17 bus, or on other Metro options, Bart, Trains & VTA. To my understanding the MTC requires \$100,000 a year to join, but cheaper options should be available. <u>With</u> over 80,000 commuters traversing hwy 17 a day – this would help encourage alternate use of multi-modal transportation. MTC link; https://mtc.ca.gov/tools-resources/mtcabag-library <u>Clipper info</u>; https://mtc.ca.gov/news/clippersm-tops-300000-daily-boardings-mark	Thank you for your comments. Your comments will be shared with the regional transit operators staff as they are responsible for passenger fares and passes in the AMBAG region. In addition to the traditional farebox, MST operates an open-loop payment system where any passenger can use Visa and Mastercard contactless-enabled bank cards and mobile wallets (Apple Pay, Google Pay, Samsung Pay, and Fitbit Pay) are accepted. MST has researched participation in the Clipper Card program and it would be cost-prohibitive due to the high installation and ongoing maintenance fees and the low number of riders coming from the San Francisco Bay Area.	Email	11/24/2021

Number	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
5	Public	Pisano	Michael	Transportation Investments (Chapter 2)	The Metropolitan Transportation Commission (MTC) has joined 101 cities & nine counties to help all with the Bay Area’s transportation needs. MTC directly distributes more than \$1 billion year to local public transit agencies and other recipients, and prioritizes requests from local agencies for millions more in state and federal funds. It seems that Santa Cruz County & Monterey County should join together to help keep the viability of transportation in both Counties – like the MTC... Like; Adding a Clipper Card MTC link: https://mtc.ca.gov/about-mtc/what-mtc Further Info: The transportation needs in Santa Cruz County is large, and is not very well funded. Our Metro is the best that I have experienced. Although: The Metro does not go to many large employers in our county. Our Metro is the only form of mass-transit options available in our County. Our Metro does not yet have an Automatic Vehicle Location system to help drive more use. The Metro frequency is lacking and causes many to find other means of travel. The Santa Cruz Metro pricing is ok, but should be free for certain residents; - Free Ride for Jurors - Free Ride for Veterans - Free Ride for Seniors. - Free Ride for Kids under 18. - Free Ride for Middle & High School Students. Info by Dr. Kari Edison Watkins, PhD, PE Further Information links; https://its.ucdavis.edu/its-calendar/ http://tscore.ce.gatech.edu/	Thank you for your comments. Your comments will be shared with the regional transit operators staff as they are responsible for passenger fares and passes in the AMBAG region. In addition to the traditional farebox, MST operates an open-loop payment system where any passenger can use Visa and Mastercard contactless-enabled bank cards and mobile wallets (Apple Pay, Google Pay, Samsung Pay, and Fitbit Pay) are accepted. MST has researched participation in the Clipper Card program and it would be cost-prohibitive due to the high installation and ongoing maintenance fees and the low number of riders coming from the San Francisco Bay Area.	Email	12/1/2021
6	Public	Pisano	Michael	Transportation Investments (Chapter 2)	I have asked many local groups, but to no avail. What can AMBAG do to influence UBERPool & LyftLine to make available this feature to Santa Cruz County (I know same name as the Metro Lift-Line)? I sometimes take the Amtrak Hwy17 bus to visit family in Mt View, CA. I then grab a Uber to Mt View from the San Jose Diridon station. I was amazed at the savings I was able to gain with UberPool in late 2019. The normal Uber ride to Mt View from San Jose was \$20.00, and If I took UberPool the ride share was \$14.00. I was further amazed: if I walked two blocks from the Diridon station to pick up a UberPool ride – my UberPool ride was \$8.00. So from \$20 to \$8 was a \$12 savings. Think of the commute savings...This is a win-win for Uber drivers & Uber riders - The riders get the ability to add money for themselves on ride they would not get, and riders save money by sharing a ride. Thank You for your time & consideration.	Thank you for your comments. Your comments will be shared with the regional transit operators staff as they are responsible for passenger fares and passes in the AMBAG region. Transit operators do not regulate or have authority over UberPool or Lyft.	Email	12/15/2021

Number	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
7	Public	Pisano	Michael	Transportation Investments (Chapter 2)	I would like to see more information on what makes a walkable city? What goals are we going to use to make are County more walkable... Some cities have robots delivering food, (like Mt. View) – do not know what this will do to delivery employees, but with the great resignation – who knows. I would like to see funding for a Bus Stop Committee: The Santa Cruz Metro had a Bus Stop committee, but disbanded after losing funding due to budget deficit. A bus stop committee can draw into meetings; local public works, Caltrans, etc.. to help improve or add bus stops. May have access to funding to complete projects. I would like to see funding for a Pedestrian Committee: The SCCRTC had a Pedestrian Committee, but it was disbanded. A Pedestrian Committee can draw into meetings; local public works, Caltrans, etc.. to help improve walkable pedestrian safety. May have access to funding to complete projects. Thank You for your time and consideration.	Thank you for your comments. Your comments will be shared with SCCRTC, Santa Cruz METRO and County of Santa Cruz staff as they are responsible agencies for implementing your suggestions.	Email	1/12/2022
8	Public	Pisano	Michael	Transportation Investments (Chapter 2)	If funding could be available for more Bike Lockers in Santa Cruz County. We are given great rebates for electric bikes, but at \$3000 needed to purchase a decent ebike with the high propensity for those ebike to be stolen. To add bikelink controlled bike lockers at more retail locations. If funding could be added to add quick EV charging stations in Soquel Village. If funding could be added to add quick EV charging stations at Retail locations, and at other public parking lots (or public parking garages). Thank You for your time and consideration.	Thank you for your comments. Your comments will be shared with SCCRTC and County of Santa Cruz staff as they are responsible agencies for implementing your suggestions.	Email	1/12/2022
9	Public	Pisano	Michael	Transportation Investments (Chapter 2)	Add incentives to add Flex Fuel stations in Santa Cruz County: We have no flex fuel stations (E85) in Santa Cruz County to help lower our carbon footprint – while we wait for other changes & other sustainable incentives. Here is an example of the closest nearby locations - https://propelfuels.com/ Thank You for your time and consideration.	Thank you for your comments. Your comments will be shared with SCCRTC and County of Santa Cruz staff as they are responsible agencies for implementing your suggestions.	Email	1/12/2022

Number	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
10	Public	Pisano	Michael	Transportation Investments (Chapter 2)	We have many workers that work early in the morning, and later in the evening, but we do not have a bus service during most of these times. Other Counties have a “All Nighter Service” to get people home safe from work. We have several work locations that start shifts at 6am, and we have many restaurants/bar that end their workday after midnight. The GO program in Downtown Santa Cruz is awesome, but it does not have the funding to fund an earlier or later Metro service. I was in manufacturing for several decades and know that I had some workers that strongly requested to only working later shifts. Can there be special funding, in the “Draft 2045 MTP/SCS”, to allow a special circular “All Nighter” bus service to capture all of our counties Metro stations to help get people home safe from work? I envision a daily hourly one-way circular bus route that travels around the county, between Midnight & 6am, that would stop at all the counties transit centers in Watsonville, Capitola, Scotts Valley & Santa Cruz (7-days a week). Thank You for your time and consideration.	Thank you for your comments. The 2045 MTP/SCS must be a financially constrained plan so not all transportation investments and services are able to be included. Your comments will be shared with SCCRTC and Santa Cruz METRO staff as they are responsible agencies for updating the project list and implementing your suggestions.	Email	1/13/2022
11	Public	Downing	Rebecca	Executive Summary and Sustainable Communities Strategy (Chapter 4)	My name is Rebecca Downing and I live in Seacliff Aptos and I have a comment and a recommendation. Both the Executive Summary and the Strategy section state that the plan is required to analyze where people are going and how they want to get there in order to build a transportation network that addresses the mobility and accessibility needs of the region, that's a quote from the plan. It continues to note associated strategies, including focusing on growth in transportation corridors and operating more travel choices, and increased efficiencies in the current transportation system, and these strategies address where people are going, but not how they want to get there. I have asked at previous RTC meetings and I think I've asked your staff possibly and made some phone calls to conduct more comprehensive outreach to determine both where and how residents wish to travel. If this work has been done throughout our region, you know, it should be included in the plan. And if not, I ask you to request inclusion and reporting of this work in the moving forward document so that it reflects the desires of those who will be affected by these transportation projects. Thank you.	The AMBAG Regional Travel Demand Model (RTDM) was developed to replicate travel behavior and forecast travel behavior in the future. This is done based upon state and national household travel surveys, Census data, employment and traffic data. The RTDM utilizes innovative techniques to capture travel behavior at a more individual-based level and incorporates disaggregate level data into some of the modeling stages. Transportation projects are evaluated based on how well they meet existing and project travel demand, i.e. where people live and where they want to go (work/school/shop, etc.). Mobility and accessibility are key goals when evaluating each transportation project/program/services. In addition, AMBAG conducted virtual workshops in spring 2021 asking participants to provide direct feedback on their priority transportation options and what they would use. A short online survey to provide feedback on potential new strategies to gather more input on housing, economic and transportation options was also available for those who were unable attend a workshop.	Public Hearing	1/19/2022

Number	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
12	Public	Wilshusen	Linda	Appendix G	Please explain how the performance measures can show identical outcomes for drive alone and carpool on Table G-1.	The AMBAG region does not have many carpool or high occupancy vehicle lanes. Therefore, people traveling alone and traveling in a carpool have similar travel times and other performance outcomes.	Public Hearing	1/19/2022
13	Public	Wilshusen	Linda	Appendix C	Please confirm that the project lists are identical to the local RTPs.	Yes, the project list that is in our tri-county AMBAG Metropolitan Transportation Plan for each county are the same project lists that are in at the SCCRTC’s Regional Transportation Plan (RTP) Project List, TAMC’s project list for their RTP, as well as San Benito's RTP.	Public Hearing	1/19/2022
14	Public	Wilshusen	Linda	Sustainable Communities Strategy (Chapter 4)	Are these SCS maps consistent with the county general plans?	The SCS maps in the Draft 2045 MTP/SCS were developed based on direct input from the local jurisdictions on land use for 2020 and 2045. The SCS maps go out to the year 2045 and many of the jurisdictions, including both local cities and counties have general plans that may only go out to the horizon year of 2030 and sometimes 2035. The SCS maps are not inconsistent with the local general plans but since they have different horizon years they are not identical.	Public Hearing	1/19/2022

Number	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
15	Public	Zappala	Holly	Transportation Investments (Chapter 2)	I live in one of the unincorporated Santa Cruz County Mountain communities off Highway 17 and my comments are regarding the potential interchange project, and specifically the one off of Laurel road, Sugarloaf and Glenwood cutoffs. This project is listed at the bottom of page 2 of 54 on the Regional Transportation Plan Project List. And so this is one that's been talked about for many years and I was disappointed to see that it was listed as unconstrained in the Next 23 years. Just, this project is incredibly important, and I'd like to ask that it be moved to the constrained list with funding secured. And so as traffic has increased throughout the Bay Area, Highway 17 has become increasingly dangerous to drive. And, you know, it's one of the most dangerous roads in the country. And, you know, I think, perhaps, most significantly, the thing that makes it dangerous is that, you know, it has these, these two different, these two functions that are very different. It's serving as a highway with these fast moving vehicles and then it's also a local road for, you know, there's thousands of people, like me who live along it and use it to access their driveway and their neighborhoods. And so, you know, you have these two uses that are very different, and it's just not ideal. You have all of these conflict points, where you have vehicles making left-hand turns, they're slowing down to exit, you know, getting on the freeway, they're accelerating from a complete stop to enter, and then it causes all of these unexpected changes in the traffic and it's especially significant when the traffic is heavier. So then, these conflict points create accidents and, you know, strain on first responders, stop traffic and delays for anyone using the highway. I just think that it's really important that we reduce these conflict points to allow vehicles to move more efficiently and safely. So currently around Sugarloaf, Laurel and Glenwood, there's 28 of these conflicts point, so that interchange project would reduce the number to four. And so, for those of us who live along Highway 17, it's become really, increasingly dangerous to enter and exit our homes, And in these neighborhoods, there's no commercial uses. So, we really need to get on Highway 17 to go anywhere. So, as a resident of one of these communities, I just wanted to share my comments, that, you know, I would gladly travel farther on a frontage road, in exchange for the safety and reliability of an interchange. So, just to close, this project is vital to enhancing the safety, mobility, and accessibility on Highway 17. And I hope that we can consider moving it to the constrained lists with funding secured. Thank you.	Operational improvements to Highway 17 are included in the unconstrained project list. The 2045 MTP/SCS must be a financially constrained plan so not all transportation investments and services are able to be included. Your comments will be shared with SCCRTC staff as they are responsible for updating the project list.	Public Hearing	1/24/2022
16	Santa Cruz County Friends of the Rail & Trail (Santa Cruz FORT)	Segal	Faina	General	The Friends of Rail and Trail first want to thank the Commission staff for all the work they have put into developing the Draft 2045 Regional Transportation Plan (RTP). We are, however, disappointed in the minimal attention given to our Santa Cruz Branch Rail Line (SCBRL) in the plan, the omission of updated funding sources, the disconnect between goals and projects, and the lack of vision for the fundamental changes needed to transform our transportation system into a more equitable and sustainable system. Accordingly, we offer the following comments for consideration in the final approved RTP:	Thank you for your comments.	Letter	1/31/2022

Number	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
17	Santa Cruz FORT	Segal	Faina	N/A	1. How Projects Meet Goals The 2045 goals, targets and policies cited in Appendix C of the draft RTP provide an excellent overview of our hopes for a more energy-efficient and less congested future. They include state mandates to significantly reduce greenhouse gas emissions (GHG) from transportation sources to 40% below 1990 levels by 2030, and to 80% below 1990 levels by 2050. Global warming is already drastically changing our local and worldwide climate in ways that will cause social turmoil and much human suffering in the coming years. Locally, we are already familiar with multi-year droughts, horrific fires, and eroding shorelines. The science is irrefutable that GHG emissions are a primary cause of global warming and climate change. The primary approaches that are used worldwide to reduce greenhouse gas emissions from transportation include improvements in vehicle technology and reduction in the number of vehicle miles traveled (VMT), primarily via public transportation investments. Yet the transportation option that was identified in the 2021 Transit Corridor Alternative Analysis & Rail Network Integration Study (TCAA/RNIS) as producing the greatest reduction in both VMT and GHG emissions, that is, electric light rail, is not given more than a passing reference in this draft RTP. So, while our RTP goals are laudable and the challenge of global warming formidable, the draft RTP itself does not rise to the occasion. In fact, the Plan does not anywhere make the link between its extensive project list and how these projects will achieve the Plan's goals.	This comment refers to the Santa Cruz County Regional Transportation Commission's Draft Regional Transportation Plan (RTP) not AMBAG's 2045 MTP/SCS.	Letter	1/31/2022
18	Santa Cruz FORT	Segal	Faina	N/A	While many pages of the draft Plan include references to statewide sustainability, transit, and rail plans, our own public rail transit project on the RTC-owned coast rail line is highlighted only inasmuch as it is "on the financially-unconstrained list of projects, due to the lack of identified and likelihood of available funding to the region for a passenger rail project." (p2-13) It should be noted that most of the projects on the draft RTP's project list do not have funding sources identified during the project development stage. Yet, the rail transit project in particular, due to extensive analysis over the past decades, has over 60% of the estimated high-end capital cost identified as likely...quite unlike any of the Highway 1 widening projects on the Constrained Project List. Also, we're wondering how it happens, then, that NEW multi-million dollar Highway 1 projects are shown on the Constrained Project List without public discussion of total project costs or funding sources? [Hwy 1 Auxiliary Lanes and Bus on Shoulders Freedom Blvd to State Park \$102M and Hwy 1: Reconstruct Bay Ave/Porter St and 41st Avenue Interchange \$14M.] FORT strongly encourages the Commission to recommit to its identified goals, targets and policies in the RTP, and to include, in the future, a constrained list of projects that can show evidence they will actually get us nearer to achieving those goals.	This comment refers to the Santa Cruz County Regional Transportation Commission's Draft Regional Transportation Plan (RTP) not AMBAG's 2045 MTP/SCS.	Letter	1/31/2022

Number	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
19	Santa Cruz FORT	Segal	Faina	N/A	2. Rail Planning In Chapter 1, the draft Plan identifies the crucial role that a planning document like the RTP serves: “planning . . . positions our community to receive funding for projects that require a well thought out plan and helps to develop collaboration on projects.” Yet the Rail section in Chapter 2 includes a simple factual description of the SCBRL and the last 20 years of its acquisition and study but makes <u>no further reference to future planning of the branch line’s use for passenger or freight service.</u> The draft Plan cites multiple references made in regional and state transportation planning documents to our SCBRL and how that planning and coordination could lead to funding. These include: Chapter 2 notes the inclusion of our SCBRL in the 2018 goals of the California State Rail Plan, including: “a new station in Pajaro/Watsonville, an analysis of connections between Santa Cruz, Monterey and the high-speed rail line at Gilroy, implementation planning for connecting Santa Cruz and Monterey to the statewide rail network at Gilroy, and establishment of hourly service by 2040, if recommended by the 2022 rail plan.” (p2-15) It also notes that the Transportation Agency for Monterey County (TAMC) is “actively pursuing rail service that includes local service as well as greater regional access...local light rail service would connect the cities of Seaside and Monterey to Castroville for connections to Pajaro station and the San Francisco Bay Area and beyond.” (p2-15)	This comment refers to the Santa Cruz County Regional Transportation Commission's Draft Regional Transportation Plan (RTP) not AMBAG's 2045 MTP/SCS.	Letter	1/31/2022

Number	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
20	Santa Cruz FORT	Segal	Faina	N/A	Although not referenced in the draft Plan, our local Draft AMBAG 2045 Metropolitan Transportation Plan says in its passenger rail section, “rail projects are an important component of the regional transportation network that enhance mobility opportunities for the region’s diverse population and lead to economic vitality for the region. The planned rail services complement each other and result in reducing auto trips on regional highways . . . The Transportation Agency for Monterey County (TAMC) and the Santa Cruz County Regional Transportation Commission (SCCRTC) are working to bring rail service to Monterey and Santa Cruz Counties, so that residents can use rail to travel to jobs, education and entertainment.” (p2-11) “The 2018 California State Rail Plan and the 2020 California Freight Mobility Plan stress the importance of short line railroads, including the Santa Cruz Branch Rail Line. . . AMBAG(‘s). . . U.S. 101 Central Coast California Freight study in 2016 . . . recommends upgrading the rail on the Santa Cruz Branch Line to Federal Rail Administration Class 2 rail, allowing freight train speeds of up to 25 mph on sections in Santa Cruz County in order to improve freight connectivity to other regions in California and nationwide.” (p2-15) Given the importance of planning in being successful in competing for public project funding, the Commission should include in the RTP additional discussion of the Transit Corridor Alternatives Analysis and Rail Network Integration Study (TCAA/RNIS) evaluation of transit investment options and its selection of electric passenger rail as the locally preferred alternative for the SCBRL.	The Santa Cruz County 2021 Transit Corridor Alternative Analysis and Rail Network Integration Study, as developed by the Santa Cruz County Regional Transportation Commission, identified electric passenger rail as the preferred alternative. This project is included in both SCCRTC's 2045 Regional Transportation Plan and the 2045 MTP/SCS as an unconstrained project.	Letter	1/31/2022

Number	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
21	Santa Cruz FORT	Segal	Faina	N/A	3. Funding The project list fails to directly connect back to goals, targets, and policies identified. This is especially true when it comes to the SCBRL. On November 15, 2021, President Biden signed the bipartisan Infrastructure Investment and Jobs Act (IIJA) that the US Federal Railroad Administration (FRA) website calls “a generational investment in America’s intermodal transportation system of which freight and intercity passenger rail are an integral part. . . will provide unprecedented federal funding for rail improvement projects in America. Over the next five years, that means greatly expanding existing FRA programs and creating new programs to enhance our nation’s rail network. The bipartisan infrastructure law includes \$102 billion in total rail funding, including \$66 billion from advanced appropriations, and \$36 billion in authorized funding.” The IIJA also includes \$27 billion just for bridge repairs. This funding will significantly change the focus on rail throughout the country and specifically in California with its current emphasis on rail through the State Rail Plan. California alone is in line to receive \$4.2 billion from the IIJA. And yet Chapter 5 of the draft RTP on funding completely down plays this dramatic new funding source, saying “as part of negotiations for a multiyear federal infrastructure plan, congress adopted a new federal transportation act (Investing in a New Vision for the Environment and Surface Transportation in America or INVEST act) which is expected to increase funding for transportation. Details on what this means for projects in Santa Cruz County will be integrated into RTP updates once available.” (p5-2,3). We also want to call to your attention that later in Chapter 5, there is an outdated discussion of federal funds for infrastructure, saying “while Congress and the President agree that the nation’s infrastructure is a priority, there has been no consensus around specific programs that would be funded or how to pay for transportation system projects.” (p5-6). The Plan’s description of Unconstrained Projects is: “projects that cannot be implemented over the next 25 years unless there are significant changes in the amount of local, state, and federal funding available for transportation.” Given the magnitude of increased funding that will be available over the next 5 years from both this new federal funding and resulting impact on state funding, we feel rail projects now definitely meet this definition of “significant changes.” We ask the Commission to revise this section to provide more current and complete description of the IIJA.	This comment refers to the Santa Cruz County Regional Transportation Commission's Draft Regional Transportation Plan (RTP) not AMBAG's 2045 MTP/SCS.	Letter	1/31/2022
22	Santa Cruz FORT	Segal	Faina	N/A	We realize the final passage of this legislation may have happened after the current draft of the RTP was completed, but it is sufficiently important to make these revisions now before the RTP is adopted. It should also specifically be mentioned in the Rail section of the Plan. Given the magnitude of increased funding that will be available over the next 5 years, we also ask the RTC to move the following rail projects from the unconstrained list to the constrained list. Public Transit on Watsonville-Santa Cruz Rail Corridor - RTC-P02 - \$825,000 unconstrained Rail line: Freight Service Upgrades - RTC-P41 - \$25,000 unconstrained Recreational Rail Infrastructure - RTC 25 - \$5,340 unconstrained	This comment refers to the Santa Cruz County Regional Transportation Commission's Draft Regional Transportation Plan (RTP) not AMBAG's 2045 MTP/SCS.	Letter	1/31/2022

Draft 2045 MTP/SCS Public Comments and Draft Responses Received During the Public Comment Period

Number	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
24	Santa Cruz FORT	Segal	Faina	Vision (Chapter 1) and Appendix C	Please accept the Santa Cruz County Friends of the Rail & Trail (FORT) comments on the DRAFT Santa Cruz County 2045 Regional Transportation Plan as pertaining as well to the Goals and Policies, Performance Measures, and Project List in the DRAFT 2045 Metropolitan Transportation Plan & the Sustainable Communities Strategy. In particular, FORT would like to highlight three paragraphs early in the attached letter as they embody our key comment on the Santa Cruz County Draft RTP, which applies as well as the Draft MTP: Global warming is already drastically changing our local and worldwide climate in ways that will cause social turmoil and much human suffering in the coming years. Locally, we are already familiar with multi-year droughts, horrific fires, and eroding shorelines. The science is irrefutable that GHG emissions are a primary cause of global warming and climate change. The primary approaches that are used worldwide to reduce greenhouse gas emissions from transportation include improvements in vehicle technology and reduction in the number of vehicle miles traveled (VMT), primarily via public transportation investments. Yet the transportation option that was identified in the {Santa Cruz County} 2021 Transit Corridor Alternative Analysis & Rail Network Integration Study (TCAA/RNIS) as producing the greatest reduction in both VMT and GHG emissions, that is, electric light rail, is not given more than a passing reference in this draft RTP. So, while our RTP goals are laudable and the challenge of global warming formidable, the draft RTP itself does not rise to the occasion. In fact, the Plan does not anywhere make the link between its extensive project list and how these projects will achieve the Plan's goals. Thank you very much for your consideration of our comments.	The 2045 MTP/SCS achieves the regional greenhouse gas emissions reductions targets established by the California Air Resources Board (CARB). The Santa Cruz County 2021 Transit Corridor Alternative Analysis and Rail Network Integration Study, as developed by the Santa Cruz County Regional Transportation Commission, identified electric passenger rail as the preferred alternative. This project is included in both SCCRTC's 2045 Regional Transportation Plan and the 2045 MTP/SCS as an unconstrained project.	Email	1/31/2022
23	Santa Cruz FORT	Segal	Faina	N/A	Conclusion We find it shortsighted for the Commission to adopt a twenty-year planning document that pays relatively little attention to one of the three key transit corridors identified in the RTC's 2019 Unified Corridor Study - the Santa Cruz Rail Branch Line. In doing so, this Draft RTP ignores the 20 years and hundreds of thousands of dollars in planning that have gone into refining successful project outcomes in the most underutilized transportation corridor in our county.	This comment refers to the Santa Cruz County Regional Transportation Commission's Draft Regional Transportation Plan (RTP) not AMBAG's 2045 MTP/SCS.	Letter	1/31/2022

Number	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
25	California Coastal Commission	Drake	Sean	General	Thank you for the opportunity to provide comments on the Draft 2045 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) and Draft Environmental Impact Report (EIR). The Coastal Commission strongly supports many of the priorities enumerated in the Draft MTP/SCS, including thoughtfully planning future transportation projects to protect and conserve natural, agricultural, and other coastal resources; mitigating and adapting to the effects of climate change; advancing multimodal and active transportation opportunities; promoting affordable housing and visitor-serving facilities; and others. The Commission has a longstanding history of partnering with Caltrans, regional transportation agencies, and local governments to advance plans and projects that further these priorities consistent with the Coastal Act and Local Coastal Programs (LCPs). Commission staff appreciate the Draft 2045 MTP/SCS and associated Draft EIR as high-level framework documents that chart out how these shared priorities may continue to be implemented throughout the Monterey Bay region over the coming decades. With that frame in mind, our comments: (1) reiterate critical aspects of the planning and regulatory roles of the Coastal Commission and local governments under the Coastal Act and how these roles relate to transportation decisions, (2) seek clarity on the extent of climate change adaptation planning in the MTP/SCS, (3) remark on the discussion of active transportation; and (4) provide miscellaneous comments and suggested revisions of specific text.	Thank you for your comments.	Letter	1/31/2022
26	California Coastal Commission	Drake	Sean	Sustainable Communities Strategy (Chapter 4)	2. Climate Change Adaptation As is recognized in the Draft MTP/SCS, the effects of climate change pose a significant threat to the Monterey Bay region. The draft is thorough in its discussion of opportunities to mitigate the effects of climate change by conserving natural resources and by designing a transportation system that will minimize greenhouse gas (GHG) emissions. However, discussion of climate change adaptation is largely absent from the draft. Adaptation is not mentioned in the introductory section that characterizes the term “resilient” and summarizes AMBAG’s vision for the MTP/SCS. The remainder of the document focuses on sustainability almost exclusively in terms of GHG minimization. Of the 174 pages in the draft, aside from a few cursory mentions, climate change adaptation is confined to a one-page section beginning on page 4-27. The Draft MTP/SCS’s focus on GHG mitigation is understandable given that that was the emphasis of SB 375, the legislation motivating development of the document. However, the report’s focus on climate change mitigation and cursory discussion of climate change adaptation seems problematic. From our perspective, both topics are coequal public policy objectives in climate change resiliency planning. As such, we suggest that the final MTP/SCS include a discussion that provides greater context for the relationship between mitigation and adaptation, states that mitigation is the focus of this document, and recognizes that future coordinated planning is essential to adapt the Monterey Bay region to the effects of climate change. Adaptation planning for future transportation/infrastructure projects is further necessitated by Coastal Act Section 30421 and 30270 which require state and regional agencies to avoid, minimize, and mitigate the impacts of sea level rise.	Additional language regarding climate change adaptation will be added to the 2045 MTP/SCS.	Letter	1/31/2022

Number	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
27	California Coastal Commission	Drake	Sean	Sustainable Communities Strategy (Chapter 4)	3. Active Transportation and the California Coastal Trail The Coastal Commission has been a longstanding partner with Caltrans, regional transportation agencies, and local governments in promoting active transportation in California’s coastal zone as a means of maximizing public access to and along the coast, reducing greenhouse gas emissions, and improving the overall livability of coastal communities for residents and visitors alike. A particular point of focus for this coordination has been continuing to promote and develop the California Coastal Trail (CCT), a continuous and interconnected public trail system along the California coastline from Oregon to Mexico. As it continues to expand, the CCT provides an increasingly critical active transportation resource that connects coastal communities to natural resources, other active transportation and public transit networks, and one another. For these reasons, the Commission has placed a high priority on developing plans and projects that continue to build out the CCT. Given these efforts, we are gratified to see that page 2-16 of the Draft MTP/SCS recognizes the CCT and the roles of the Coastal Commission and the State Coastal Conservancy in developing the trail. We would suggest adding to this section that the CCT’s presence in the Monterey Bay region is not confined to the Monterey Bay Sanctuary Scenic Trail, and that continuing to build out segments of the CCT has the potential to provide enhanced active transportation connectivity throughout the region, including on State Parks lands and other public lands. To help readers visualize this potential, we would suggest that this section of the MTP/SCS reference the CCT Mapping Viewer, which is an interactive online map of existing CCT segments that was published by Coastal Commission and State Coastal Conservancy staff in February.¹ This tool can be helpful to AMBAG and its partners for identifying gaps or improvement areas in the region’s coastal active transportation network.	Additional language regarding the California Coastal Trail will be added to the 2405 MTP/SCS.	Letter	1/31/2022

Number	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
28	California Air Resources Board	Kimura-Szito	Lezlie	General	California Air Resources Board (CARB) staff appreciate the opportunity to review the Association of Monterey Bay Area Governments (AMBAG) draft Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) known as “2045 Metropolitan Transportation Plan and the Sustainable Communities Strategy.” To achieve the State’s climate mandates, California needs significant and immediate changes to how we plan, fund, and build our communities and transportation systems. The SCS plays a critical role in supporting the State’s climate efforts, and local objectives to create an economically vibrant region that responds to the needs of its diverse communities and provides better access to jobs and cleaner air for its residents. In reviewing the draft RTP/SCS, CARB staff looked to identify whether additional information would be needed to conduct the SCS GHG evaluation under the Sustainable Communities and Climate Protection Act of 2008, Senate Bill (SB) 3751, and how the items identified during the review of AMBAG’s Technical Methodology were addressed as documented in CARB’s letter to AMBAG in May 2021. CARB staff will conduct its final evaluation, as outlined in the Final Sustainable Communities Strategy Program and Evaluation Guidelines (SCS Evaluation Guidelines) once AMBAG adopts its final 2022 RTP/SCS. Based on our review of the draft RTP/SCS, CARB staff requests that AMBAG provide the following additional information as part of its final 2022 RTP/SCS submittal.	Thank you for your comments.	Letter	1/31/2022
29	California Air Resources Board	Kimura-Szito	Lezlie	Various	Documentation of GHG Emissions Estimates Chapter 4 of the draft RTP/SCS discusses planned GHG emission reduction strategies, and Chapter 5 and Appendix F outlines the estimated GHG emissions reductions from the SCS; however, AMBAG will need to provide additional information on how the estimates were derived for CARB staff to conduct its evaluation of the GHG estimates. Of the items identified in CARB’s May 2021 letter (see attached), CARB requests particular attention to providing documentation of: Performance metrics in AMBAG's plan to demonstrate how they align with SCS goals to meet the 2035 GHG reduction target (for example, household vehicle ownership, mode split, and others). The assumptions and quantification methods used for each off-model strategy in the 2022 RTP/SCS. This documentation should include a discussion of how the potential for double counting among strategies was addressed in cases where an overlap with travel demand model quantification could occur. How EMFAC was applied in estimating the GHG emissions for the plan. AMBAG should use the same version of EMFAC (EMFAC 2014) and the adjustment factors used in the last SCS in accordance with SCS Evaluation Guidelines when calculating its GHG emissions estimates. The auto operating cost and induced travel calculations used.	Additional language regarding the GHG emission reduction strategies will be added to the 2045 MTP/SCS. AMBAG will submit the required information as documented in CARB's SCS Evaluation Guidelines as part of its SCS submittal for CARB's official review.	Letter	1/31/2022

Number	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
30	California Air Resources Board	Kimura-Szito	Lezlie	General	The SCS Evaluation Guidelines are intended to clarify the scope of CARB’s updated evaluation process and can be a helpful resource when documenting underlying SCS strategy assumptions and their quantification. As part of the final review process, CARB staff may request additional information to conduct and support our final evaluation pursuant to SB 375.	Comment noted.	Letter	1/31/2022
31	Public	Pisano	Michael	Transportation Investments (Chapter 2)	1.We only have one viable park & ride in the Santa Cruz County; Please add funding to increase the Pasatiempo Park & Ride to encourage alternate forms of commuting – there is adequate land near the Pasatiempo park & ride to triple the current park & ride size. 2.Please add funding to allow UC Santa Cruz (UCSC) to increase the UCSC Van Pool access to other UCSC locations outside of the UCSC physical campus; like Van pools to the UCSC Scotts Valley campus, Van pools to the UCSC Delaware Campus, and Van pools to the UCSC Marine Lab campus. 3.Please fund incentives to bring flex fuel filling stations & hydrogen fuel filling stations to Santa Cruz County – as the nearest are over-the-hill in San Jose. 4.Please allow funding incentives for diverting bio-waste from landfills to convert to Bio-Fuels. 5.Please allow incentives to purchase for Hybrid Vehicles – similar incentives to electric vehicles – We need a longer hybrid period before going to all electric vehicles – as the infrastructure is not here for all electric vehicles. And for safety and choices – as the recent hurricane in New Orleans only had one gas station open by generator, and electricity was off there for almost a month. Thank You for your time & consideration	Thank you for your comments. The 2045 MTP/SCS must be a financially constrained plan so not all transportation investments and services are able to be included. Your comments will be shared with SCCRTC, Santa Cruz METRO and County of Santa Cruz staff as they are responsible agencies for updating the project list and implementing your suggestions.	Email	1/31/2022

Number	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
32	Public	Pisano	Michael	Transportation Investments (Chapter 2)	It would be interesting to add a way (or machine) to deposit plastic bottles to pay for bus tickets. To increase Safety; Please add funding to add a sidewalk on both sides of Soquel Dr between Robertson St & 41st Ave. FYI: “Clean California” for grant money to beautify local areas; Might be able to use for 41st & Soquel, and to add bus shelters at the Pasatiempo Park & Ride. https://cleancalifornia.dot.ca.gov/ Please add funding to add (see pictures below); 1. Overhead crosswalk LED lighting on all Hwy 9 crosswalk, and for crosswalk on parts of Soquel Dr. 2. Please add funding for in-street-crosswalk safety blinkers. 3. Please add funding to add bike ramps at outside stair cases. 4. Please add funding for more time-card boxes to cross at large intersections – like at; a. Hwy 9 & Hwy 1 at River St. b. 41st & Soquel Dr c. Ocean St & Water St Overhead crosswalk lighting; https://carmanah.com/overhead-lighting-crosswalks/ https://www.traffictotechnologytoday.com/news/vulnerable-road-users/crosswalk-night-time-safety-system- launched-at-atssa-expo.html	Thank you for your comments. The 2045 MTP/SCS must be a financially constrained plan so not all transportation investments and services are able to be included. Your comments will be shared with SCCRTC, Santa Cruz METRO and County of Santa Cruz staff as they are responsible agencies for updating the project list and implementing your suggestions.	Email	1/31/2022
33	Caltrans District 5	Monroy-Ochoa	Orchid	General	<u>General Comments:</u> Caltrans would like to commend AMBAG for providing a robust discussion of the region with a clear direction towards a sustainable future. As well as working with the other agencies in the region to come up with a comprehensive and coordinated long range plan.	Thank you for your comments.	Letter	1/28/2022
34	Caltrans District 5	Monroy-Ochoa	Orchid	Appendix J	Where possible, AMBAG should ensure that specific page numbers are referenced in the RTP Checklist instead of entire chapters. This makes it easier to use the RTP checklist and ensure the corresponding requirements are met.	Comment noted.	Letter	1/28/2022
35	Caltrans District 5	Monroy-Ochoa	Orchid	Various	All GIS maps throughout the document are showing State Route (SR) 146 within San Benito County. That segment of SR 146 is no longer in the State Highway System. It has been relinquished to the National Parks. Please add a footnote in the maps indicating that SR 146 has been relinquished.	This will be updated in the Final 2045 MTP/SCS.	Letter	1/28/2022

Number	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
36	Caltrans District 5	Monroy-Ochoa	Orchid	Appendix J	<u>Consultation and Cooperation, RTP checklist, Appendix J:</u> (2) Why is this question not applicable? Will it be answered by the time the final RTP is adopted?	AMBAG had not received any comments on the Draft 2045 MTP/SCS at the time of release in November 2021. All comments received on the Draft 2045 MTP/SCS will be included in a new Appendix K for the Final 2045 MTP/SCS. The checklist in Appendix J will be updated for the Final 2045 MTP/SCS.	Letter	1/28/2022
37	Caltrans District 5	Monroy-Ochoa	Orchid	Appendix J	(3; 4; 5; & 9) The pages referenced imply the proper agencies were consulted, but the specific agencies do not seem to be identified. Please provide the specifics for this question.	This will be updated in the Final 2045 MTP/SCS.	Letter	1/28/2022
38	Caltrans District 5	Monroy-Ochoa	Orchid	Appendix J	(6) There is no specific reference to the California State Wildlife Action Plan. Please ensure this requirement is met.	This will be updated in the Final 2045 MTP/SCS.	Letter	1/28/2022
39	Caltrans District 5	Monroy-Ochoa	Orchid	Appendix J	(12) The RTP checklist does not specify where this requirement can be found. Please add a page number to be referenced.	This will be updated in the Final 2045 MTP/SCS.	Letter	1/28/2022
40	Caltrans District 5	Monroy-Ochoa	Orchid	Appendix J	(15) Why is this question not applicable? Please explain.	The checklist refers to the adopted MTP/SCS not the draft MTP/SCS. This will be updated in the Final 2045 MTP/SCS.	Letter	1/28/2022
41	Caltrans District 5	Monroy-Ochoa	Orchid	Appendix J	<u>Title VI, RTP checklist, Appendix J:</u> (1) Specific page numbers are not mentioned in the Checklist. Please provide page numbers.	This will be updated in the Final 2045 MTP/SCS.	Letter	1/28/2022
42	Caltrans District 5	Monroy-Ochoa	Orchid	Appendix J	<u>Modal, RTP checklist, Appendix J:</u> (1) There is more discussion regarding this question elsewhere. Please provide additional page numbers to be referenced in the RTP Checklist.	This will be updated in the Final 2045 MTP/SCS.	Letter	1/28/2022
43	Caltrans District 5	Monroy-Ochoa	Orchid	Appendix J	(4) The page referenced does not cover the entire discussion of the topic. Please revise the pages referenced to include the entire discussion on airports and aviation.	This will be updated in the Final 2045 MTP/SCS.	Letter	1/28/2022

Number	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
44	Caltrans District 5	Monroy-Ochoa	Orchid	Appendix J	(7) The page referenced does not cover the entire discussion of the topic. Please revise the pages referenced to include the entire discussion on the California Coastal Trail.	This will be updated in the Final 2045 MTP/SCS.	Letter	1/28/2022
45	Caltrans District 5	Monroy-Ochoa	Orchid	Appendix J	Programming: RTP checklist, Appendix J (3): There is insufficient information regarding the unconstrained project list. Please include a listing of all unconstrained projects within the region.	This will be updated in the Final 2045 MTP/SCS.	Letter	1/28/2022
46	Caltrans District 5	Monroy-Ochoa	Orchid	Financial Plan (Chapter 3)	Page 3-6: Revise "State Highway Operations and Protection Program" to "State Highway Operation and Protection Program" in multiple places on page. Also suggest revising "Regional Share State Transportation Improvement Program" to "State Transportation Improvement Program" in 1st paragraph.	This will be updated in the Final 2045 MTP/SCS.	Letter	1/28/2022
47	Caltrans District 5	Monroy-Ochoa	Orchid	Financial Plan (Chapter 3)	Page 3-9: Revise "Regional Improvement Program" to "Regional Transportation Improvement Program" in 1st paragraph on page.	This will be updated in the Final 2045 MTP/SCS.	Letter	1/28/2022
48	Caltrans District 5	Monroy-Ochoa	Orchid	Financial Plan (Chapter 3)	Page 3-9, ATP: suggest updating Active Transportation Program discussion to indicate that the program is now augmented with \$100 million annually from SB-1 Road Maintenance and Rehabilitation Account (RMRA) funds.	This will be updated in the Final 2045 MTP/SCS.	Letter	1/28/2022
49	Caltrans District 5	Monroy-Ochoa	Orchid	Appendix J	Financial, RTP checklist, Appendix J: (2; 7; & 8) The consistency statement is assumed but not explicitly made in the page referenced. Please revise.	This will be updated in the Final 2045 MTP/SCS.	Letter	1/28/2022
50	Caltrans District 5	Monroy-Ochoa	Orchid	Appendix J	Environmental, RTP checklist, Appendix J: (1; 4; & 5) The reference in the checklist is unclear on where the requirement is met. Please provide specifics that make it easier to identify.	This will be updated in the Final 2045 MTP/SCS.	Letter	1/28/2022
51	Caltrans District 5	Monroy-Ochoa	Orchid	Public Participation (Chapter 6)	Public Participation: Page 6-4, 1st sentence: Revise "January 2020 and designed" to "January 2020 and was designed."	This will be updated in the Final 2045 MTP/SCS.	Letter	1/28/2022
52	Caltrans District 5	Monroy-Ochoa	Orchid	Public Participation (Chapter 6)	Page 6-5, AMBAG Board of Directors, Caltrans D5 is an Ex-Officio member that was not included in the list.	This will be updated in the Final 2045 MTP/SCS.	Letter	1/28/2022
53	Caltrans District 5	Monroy-Ochoa	Orchid	Public Participation (Chapter 6)	Page 6-6, Coordinating with Partner Agencies: Revise "San Benito County Council of Governments" to "Council of San Benito County Governments" in 1st sentence.	This will be updated in the Final 2045 MTP/SCS.	Letter	1/28/2022
54	Caltrans District 5	Monroy-Ochoa	Orchid	Appendix B	Appendix B: Page B-6: Suggest spelling out SAFE acronym.	This will be updated in the Final 2045 MTP/SCS.	Letter	1/28/2022
55	Caltrans District 5	Monroy-Ochoa	Orchid	Appendix B	Page B-7: Revise "State Highways Operation and Protection Program" to "State Highway Operation and Protection Program" Also under "Local Revenues," revise "SBtCOG" to "SBCOG."	This will be updated in the Final 2045 MTP/SCS.	Letter	1/28/2022

Number	Agency	Last Name	First Name	Chapter	Comment	Response	Comment Format	Date
56	Caltrans District 5	Monroy-Ochoa	Orchid	Appendix B	Page B-8: Local Transportation Sales Tax, end of second bullet: revise “and a sales tax in San Benito County beginning in 2020” to “and Measure G (San Benito County).”	This will be updated in the Final 2045 MTP/SCS.	Letter	1/28/2022
Draft 2045 MTP/SCS Public Comments and Draft Responses Received After the Close of the Public Comment Period								
57	Public	Downing	Rebecca		Both the executive summary and strategies section state that "This Plan is required to analyze where people are going and how they want to get there in order to build a transportation network that addresses the mobility and accessibility needs of the region." It continues to note associated strategies including focusing on growth in transit corridors and offering more travel choices and increased efficiencies within the current transportation system. These strategies address where people are going but not how THEY want to get there. Please include a plan to conduct more comprehensive outreach to determine both where and how residents wish to travel. Online surveys, emails and public meetings do not capture the views of those least likely to participate this way. Most residents are too busy driving to work to take the time to respond. Asking all residents where they want to go, how they want to get there, AND, to inform the 2045 work, what would get them out of their vehicle, is required to create equitable, sustainable choices for us. It must be comprehensive if you are to develop regional projects people will use. If this work has been done throughout our three counties, it should be included in the plan. If not, I ask you to for its inclusion and reporting of this work in the Moving Forward Monterey Bay 2045 plan so it reflects the desires of those who will be affected by its projects.	The AMBAG Regional Travel Demand Model (RTDM) was developed to replicate travel behavior and forecast travel behavior in the future. This is done based upon state and national household travel surveys, Census data, employment and traffic data. The RTDM utilizes innovative techniques to capture travel behavior at a more individual-based level and incorporates disaggregate level data into some of the modeling stages. Transportation projects are evaluated based on how well they meet existing and project travel demand, i.e. where people live and where they want to go (work/school/shop, etc.). Mobility and accessibility are key goals when evaluating each transportation project/program/services. In addition, AMBAG conducted virtual workshops in spring 2021 asking participants to provide direct feedback on their priority transportation options and what they would use. A short online survey to provide feedback on potential new strategies to gather more input on housing, economic and transportation options was also available for those who were unable attend a workshop.	Email	2/6/2022